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CONTENT

IMMUNOHISTOCHEMISTRY - AN UPDATE

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Abstract

Immunohistochemistry is the technique of reacting antibody with antigen *in situ* for the identification of specific cellular or tissue components using a whole array of reporter molecules (fluorescent, chromogenic or gold) that reveal the locations in the tissue where the antibody-antigen reaction has taken place. It differs from classic histology in the exquisite specificity with which it can recognize a given tissue antigen through the use of mono- or polyclonal antibodies raised against the antigen of interest. Faster techniques like flow cytometry allow the identification and quantitation of specific antigens on intact cells but it cannot replace conventional immunohistochemistry (IHC) at the tissue level. IHC has become an indispensable technique in diagnostic pathology, oncology and medical research. Even advanced and powerful molecular diagnostic techniques like the *in situ* polymerase chain reaction (PCR) and *in situ* hybridization are a variation on the IHC theme and an effort to visualize intact and specific cells in the context of their location in the tissue albeit at the transcript level.

Introduction

Although IHC as a technique is simple in theory, yet getting consistent, reproducible and reliable results depends on a multitude of factors all of which have to be thoroughly understood and kept in mind while performing the technique. Each laboratory needs to play around with the standard text-book procedure and optimize conditions to suit their needs and obtain acceptable final results. We first address problems relating to IHC on paraffin-embedded tissue sections. Variables affecting a standard IHC protocol using paraffin-embedded tissue may be divided into two broad categories and would be explained in detail below.

1. Pre – IHC staining (tissue processing) variables which include: –

    a) Tissue Preservation through Fixation.

Application of nanotechnology in waste water treatment

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ABSTRACT:

Water from industry is main source of water pollution. There are many sources causing water pollution such as industrial effluent, city sewage etc. Industrial waste generated contains scrap metals, trash, solvents, chemicals. Waste from industries is categories into hazardous and non-hazardous waste. Hazardous waste includes certain commercial products like paints, pesticides, cleaning fluids. Waste from industry is toxic, ignitable, corrosive or reactive. Industrial waste causes dangerous health effects and environmental consequences

INTRODUCTION:

Half of the part of planet is made up of water and due to industrialization and urbanization it is getting polluted day by day. Coloured industrial waste water explains need to control pollution. Due to high rise in human population growth and urbanization large amount of waste from industries and urbans is released in water bodies. It leads to critical effects on health as well as on environment. Problems like water crisis, water pollution, climate change are increasing day by day.

Classification of Synthetic Dyes

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Abstract:

Numbers of synthetic dyes were developed in the nineteenth century. Because of the remarkable increase in the number of synthetic dyes, classification of the dyes is important. There are several ways to the classification of dyes. Based on chromophore and applications dyes are classified into various classes. In this chapter classification of the dyes is discussed with examples. Properties and uses of these dyes are discussed in brief.

Keywords: Dyes, dyeing, bathochromic shift, hypsochromic shift, diazotization, azo dyes

1. Introduction:

Dyes are used by human beings from ancient times. Dyes are chemical substance that imparts colour to the substrate. The substance is coloured when it absorbs a certain wavelength of visible light and reflects others. It depends on chromophore and auxochrome. A chromophore is mainly responsible for colour and auxochrome helps to intensify the colour. Each dye is absorbed at a certain wavelength which is called as **λ**max. An increase in the absorption wavelength is called as bathochromic shift and a decrease in the wavelength of absorption is known as a hypsochromic shift. Simillarly an increase in the intensity of colour is called as a hyperchromic shift and a decrease in the intensity of colour is called a as hypochromic shift.

Dyes have traditional applications in the textiles industry, cosmetics, and food industry. And functional dyes have applications in medical fields, in optics, in sensors, etc. Dyes can be classified based on chemical constituents, applications, and dyeing methods. Mainly dyes classified as natural and synthetic dyes. Plants and animals are the sources for natural and dyes. Examples of natural

ROLE OF INTERPLANETARY CONDITIONS ON THE SUBSTORM RELATED ABSORPTION EVENTS EXTENDED OVER SUB-AURORAL LATITUDE

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Abstract:

Cosmic noise absorption (CNA) at sub-auroral latitude is the manifestation of enhanced precipitation of charged particles in the auroral ionosphere and subsecuent expansion of auroral oval. Among many types of CNA events, Auroral substorm absorption (ASA) is a particular type of CNA event which is observed in the midnight to dawn sectors and can be associated with magnetospheric substorm. These absorption events are intense and short-lived. In the current study, we have examined the consequence of interplanetary conditions on such types of events observed at Indian sub-auroral Antarctic station Maitri (L=5.0, Geographic 70.75^0 S, 11.75^0 E; corrected geomagnetic 63.11^0 S, 53.59^0 E). Events during midnight hours to early dawn hours (2300-0500 MLT) were subjected to detailed examination to study the effect of interplanetary conditions on substorm associated absorption events. The analysis suggests that the major cause of enhanced CNA during substorms is the intense interplanetary electric field instead of individual parameter such as the interplanetary magnetic field or the solar wind velocity. In addition, the role of prolonged and enhanced convection influencing the CNA over sub-auroral latitude has been discussed.

(Keywards: Magnetospheric Substorms, Cosmic noise absorption, Imaging Riometer & Ionosphere)

Introduction:

The disturbances created in the auroral ionosphere due to the precipitating particles in the energy range of few keV during an intense magnetospheric substorm has always been an interest to the polar researchers [**Meredith et al., 2011; Longden et al., 2008; Rees et al., 1989**]. Enhanced Cosmic noise absorption (CNA) is one of the characteristics of the disturbed ionosphere mostly in the D-region (**Detric and Rogenberg, 1952**) where collision frequency is high. Auroral latitudes (magnetic 60^0 –70^0) are the most severely affected region due to a substorm activity. Nevertheless, nearly all regions of the magnetosphere undergo significant magnetic and electric field changes during substorms (**McPherron et al., 1973a; Sastri, 2002)**.Despite the fact that substorms initiate at night side of auroral latitudes, they cause fairly noticeable magnetic disturbances at mid and low

An Introduction to Linear Optimization

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Chapter 1

1. Introduction

In this chapter we are going to learn Linear Programming Problems which are also called as Linear Optimization. We will be dealing with some real-life examples of maximizing our profits, minimizing our costs, etc. Linear Optimization has a very wide role in our daily life. It is used in government sectors and industries where attempts are made to increase the efficiency or profitability and to reduce wastage. With the help of linear optimization problem we can make efficient use of resources which are limited for example man-power, availability of machine time, cost of material, raw materials and so on.

We will start this chapter with basic definition and we will be solving linear optimization problems. Sequencing is a special type of Linear optimization problem which will be discussed at the end of this chapter.

2. Linear Equations and Inequalities

An equation representing a line in 2-dimensional plane is known as linear equation in two variables. It is generally of the form $ax + by = c$ where a, b and c are real numbers and x and y are variables. Let's try an example! Take any equation of the form $ax + by = c$ and plot the graph of it. It must be a straight line.

Example: $2x - 3y = 6$.

COMPLEX NUMBERS, MATRICES AND APPLICATIONS: A REVIEW

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Abstract

A complex number is a number including area land imaginary part. Complex number can be written in the form p+iq, where p and q are real numbers, and i is called the imaginary number. It contains the regular real numbers; also extend them by adding in additional numbers and congruently increasing the accepting of addition and multiplication. One main important use of Complex number is to allow solutions to all kind of polynomial equations, even they have no solutions in real numbers.

***Key words*:** Complex numbers, Real numbers, imaginary numbers, Matrices, Determinants, Eigen values, Eigen vectors.

1 Introduction

When visualising complex numbers, it needs the use of Argand Diagrams. For constructing this, it is giving the concept of Cartesian grid with the x-axis being real numbers and the y-axis being imaginary numbers. The main property of complex numbers is the Euler's formula. The very most beautiful mathematical result in history by many mathematicians is described as Euler's formula. It suggests a mystic relationship between real numbers and imaginary numbers. Most of the computational problems are solved by dipping them to a matrix computation, and this includes often computing with matrices of vast dimension. Matrices are widely used in many areas of Mathematics. This chapter, which is giving the concepts of complex numbers, different kind of matrices and the applications related with them.

2 COMPLEX NUMBERS

2.1 Definition

Complex numbers are the numbers which are expressed in the form of **x+iy** where, x and y are real numbers and 'i' is called an imaginary number. The value of i is (√-1). For example, 3+6i is a complex number, where 3 is real part(Re) and 6 is an imaginary part(Im).

Examples of complex numbers are follows:

- 11 +3 i
- -1+2i
- 0.69 + 7 i
- √3 + √2i

Complex number is a combination of both the real number and imaginary number.

An imaginary number is usually represented by 'i', and the value of 'i' is √-1. So, the squaring value of the imaginary number will be a negative value.

The Principle of Inclusion –Exclusion

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Abstract:

The **Principle of Inclusion –Exclusion** is a method used to compute the cardinality of the union set. (The **cardinality** of a set, which is basically the size of the set. The cardinality of a set A is denoted by $|A|$.)**The Principle of Inclusion-Exclusion** is a counting technique that computes the number of elements that satisfy at least one of several properties while guaranteeing that elements satisfying more than one property are not counted twice.

The two main properties of Inclusion-Exclusion Principle are:

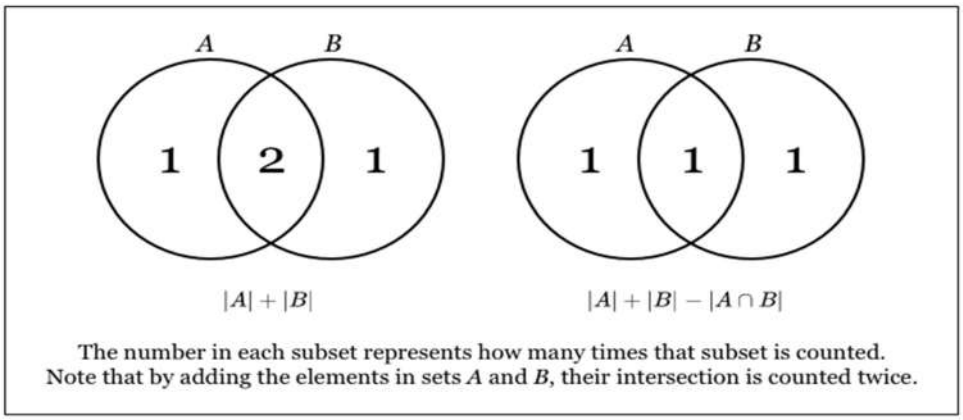
1. It computes the total number of elements that satisfy at least one of several properties.
2. It prevents the problem of double counting.

Key words: Principle of Inclusion-Exclusion, Cardinality of a set.

Inclusion-Exclusion principle defined on two sets

According to basic **Inclusion-Exclusion principle** defined on two sets

$$|A \cup B| = |A| + |B| - |A \cap B|$$



Note that when we add |A| and |B|, we are counting the elements in |A∩B| twice,

thus by subtracting it from |A|+|B|, we obtain the number of elements in $|A \cup B|$.

Now let us do some examples based on **Inclusion-Exclusion principle**

Example:1 How many integers from 1 to 100 are multiples of 2 or 3?

Solution: Let A bethe set of integers from 1 to 100 that are divisible by 2.

$$|A| = \frac{100}{2} = 50$$

INTRODUCTION TO GRAPH THEORY

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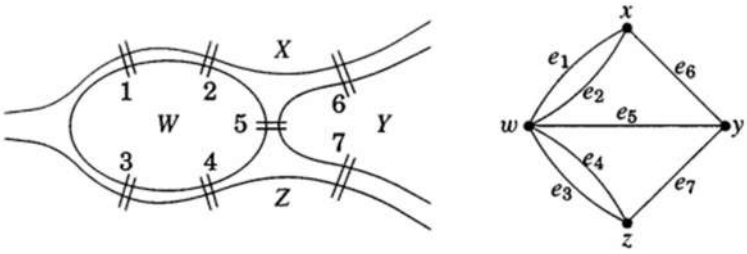
1.1. **What is a Graph?**

K*ö*nigsberg is a city located in Prussia. The city has two islands and areas in two banks, also these areas were connected using seven bridges as shown below in the left figure. The people who lived there always had a thought that if they are leaving their houses, can they return back to their houses using all the seven bridges without even repeating any of the bridge. So, one mathematician named Euler thought about this and in the beginning he thought that this is not a problem related to mathematics but later he found that this a problem in which mathematics is involved but solution to this problem is not possible. Hence, this problem was named as K*ö*nigsberg Bridge problem. K*ö*nigsberg Bridge problem motivated mathematicians to develop a new theory in mathematics called graph theory. Hence, we can use graph theory to explain this problem.



The right-side figure makes it easy to understand that each time we leave the land mass we need two bridges to return back, so even number of bridges are required to complete the desired situation but as there are seven bridges in the given location so that desired situation cannot be completed. This problem will be explained properly in this chapter. So, in this chapter we are going to see what is a graph, concept of degree of vertex, connectedness, degree sequence, Euler and Hamilton circuits, isomorphism of graphs, matrices of graph and many more.

1.1.1. **Definition:**

A **graph** $\boldsymbol{G}$ is a figure consisting of vertex set $V(G)$, the edge set $E(G)$ and a relation that associates with each edge of two vertices may or may be distinct which are called its endpoints.

Global Environmental Problems: Energy

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India is one of the five fast developing countries. Energy is the primary and most universal measure of all kinds of work by human beings and nature. Whatever happens in the world is only the expression of flow of energy in either of its forms. Energy is a crucial input in the process of economic, social and industrial development. Energy consumption in the developing countries is increasing at a faster rate. As conventional energy sources are depleting day by day, utilization of alternative energy sources is the only solution. India has made rapid strides towards economic self-reliance over the last few years. On the energy demand and supply side, India is facing severe shortages. To overcome energy crisis, government has developed many projects related to alternative energy sources. The new agricultural technologies can be developed based on non-conventional energy sources.

The power prerequisite of the world is expanding at a disturbing rate because of modern development, expanded and broad utilization of electrical contraptions.

As indicated by world energy report, we get around 80% of our energy from ordinary fossil fills like oil (36%), petroleum gas (21%) and coal (23%). It is notable that the time isn't up until this point at the point when every one of these sources will be totally depleted. Atomic energy is a similarly perfect wellspring of energy. Be that as it may, safe treatment of atomic energy reactor is a refined assignment and just around 7% of the world's complete energy prerequisite is being fulfilled by it today.

As human needs know no limits, today the greater part of the countries worldwide have been passing through a period of intensity deficiency. The emergency is more basic among the non-industrial countries.

In India, energy request is expanding at the pace of 9% per annum and flexibly isn't keepingpace. Present deficiency of electrical energy is 8%.

The expanded force interest, exhausting petroleum derivative assets and developing natural contaminationhave driven the world to think intensely for other elective wellsprings of energy.

OPTICAL FIBER

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INDEX

Introduction

Contents Page No

HUMAN RIGHTS AND PATENT MONOPOLY

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Abstract

Intellectual Property systems try to have a balance between the moral rights and economic rights of inventors and creators with the larger public interest and necessary basic needs of society. We need to have this in mind and we need to have a justifiable and sustainable patent system which has and provides for the growth of inventiveness. There should be willingness to invest in individual inventions and also there should be promotion of transfer of technology amongst nations.

A humane approach to Intellectual property laws will create a perfect balance with Patent monopoly and Public interest. This paper tries to analyse the extent of consistency of Intellectual Property Rights with various International Human right instruments. This paper also seeks to bring forth the conflict between Patent protection and Public interest. To overcome this, the Intellectual Property Regime must encourage International Cooperation in scientific and cultural fields. In the context of globalization and commercialization, perfect balance with Monopoly and Human rights is a necessity for the promotion of larger Public interest.

Introduction

In the beginning it's better to understand these two concepts of Human rights and Patent monopoly. Human rights are inherent. These rights are inherent regardless of race, language, sex, nationality, religion, sex, or any other status. If you are born as a human being you are entitled to these rights. On the other hand Patent means an exclusive right granted for an invention subject to disclosure of the technical information. It plays an invaluable role by rewarding and encouraging inventions and new technologies in every field. Patentee can prevent others from using his patent. This can lead to complete ownership as it can prevent competition.

Human Rights

The Universal Declaration of Human Rights[1] is one of the most important document which needs to be considered as the basic structure for basic equality and human dignity. Several important reasons are possible to be pointed out for the enforcement of human rights. It shall be as follows

- Enforcement of human rights ensures that the basic needs of human beings are reached
- Enforcement of Human rights protects vulnerable sections from abuse of majority
- Enforcement of Human rights ensures and encourages the basic right of freedom of speech and expression
- It can makes the government accountable and can also provide equal opportunities

IMPACT OF MERGER ON THE FINANCIAL PERFORMANCE OF BANKS

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Executive Summary

Bank consolidation through merger and acquisition has been strongly argued by many policymakers and researchers to enhance performances through synergy effect and broader geographical coverage of banking networks in India. State Bank of India merged its five associates such as State Bank of Bikaner, State Bank of Patiala, State Bank of Raipur, State Bank of Hyderabad and with Bhartiya Mahila Bank with effect from 1st October 2017. With the merger, SBI has become bigger than before. Now it has a larger asset base and ranks 45th among top banks of the world and Management of bank. The study has two objectives such as- (i) To assess the impact of merger announcement on shareholder's wealth of banks and (ii) To examine the pre and post-merger financial performance of acquiring bank (SBI). The study uses secondary data from prowess. Using event study, T test and graphical presentation the study highlights that the average PAT has decreased in the post-merger period as compared to the pre-merger period. However, the average total income, average total expenses, average total assets and average total liabilities has been increased in the post-merger period as compared to the pre-merger period for SBI.

Through event study we find that the AR and CAR of SBI impacted negatively in the pre and post 40 event days. The significance of the same has been examined through the T test.

The result of this study may help the investors and traders for setting up with the trading and investment strategies on the companies' mergers with its associates just like SBI. The result may also help the policy makers and market participants to frame the policy of the mergers in such a way that the wealth of the investors and traders should not get affected.

Key Words: Merger, profit, event study, impact

1. Introduction:

Bank consolidation through merger and acquisition has been strongly argued by many policymakers and researchers to enhance performances through synergy effect and broader geographical coverage of banking networks in India. Financial sector reforms in general and banking sector reforms, in particular, brought drastic changes in the operational system of the Indian Banking sector. Narasimham committee (1991 and 1998), amendment of MRTP Act, 1991 and Barma committee (1999) in respect of merger scrutiny paves the way for Indian banks to go for the merger.

EFFORTS OF SECONDARY SCHOOL TEACHERS IN ENHANCING 21ST CENTURY SKILLS AMONG STUDENTS – A STUDY

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Abstract

This paper study the efforts of school teachers in enhancing 21st century skills among the students. There are a handful of researches done in this area which provides an ample of scope to study area of the 21st century skills. This paper studies eight skills, which are, as follows- critical thinking as a skill, collaborative as a skill, creativity and innovation as a skill, self- direction as a skill, local connection as a skill, creativity and innovation as a tool for learning as a skill. The data was collected by using, 21st century teaching and learning survey- by Nate
K. Hixson, Jason Ravitz and Andy Whisman (2012). The findings revealed that the extent of efforts of the teachers in enhancing 21st century skills is different with different skills.

Introduction

In this era, we have witnessed the shift of economies from industrial to information and knowledge based economies. Though there are agrarian economies still existing but because of industrial economies and demand for upgradation of economies, agrarian economies are being replaced by industrial economies. This shift from agrarian economy to industrial economy has not only revolutionized the way people worked and lived but also revolutionized the way people think and the tools they used for working. The new skills and ways of working, living and thinking gave rise to form new education systems to survive and succeed in the changing world of economies.

For this paper the theoretical base was adopted from framework for 21st Century Skills (2005), Partnership for 21st Century Skills (P21) (2006), Organization for Economic Cooperation and Development (2009) and The KSAVE Model. While understanding the different frameworks and model, this study is limited to the eight skills, which are Critical thinking as a Skills, Collaborative as a Skills, Communication as a Skills, Creativity and innovation as a skills, Self-direction as a Skills, Global Connection as a Skills, Local connection as a skills and using technology as a tool for learning.

Review of related literature and researches

In order to construct a strong base for this study, review of researches was classified under: researches conducted in Abroad and researches conducted in India. There were not many researches conducted in this area. In 2016, Quigley, W.G. studied teacher's perception of 21st century instructional practices, which revealed that impact of instructional practices on the teacher's instructions in the classroom are moderately high. Quigley, W.G. pointed the importance of the communication as a skills and collaboration as a skills comparing with all the skills. Miles, J., 2014 suggested that even though concept of 21st century skills had been integrated by educators into curriculum for the students learning, there is still the necessary changes required which can help high school graduates to prepare for 21st century college and career opportunities. A case

UNDERSTANDING COVID-19 INFLUENCE ON THE WORLD ECONOMY

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Abstract

With the growth of cosmopolitanism and globalization, dense population and large-scale population movement not only further integrate the economy, but also hasten the spread of the epidemic. It has never had such an impact. Globally contagious COVID-19 outbreak has affected the Chinese economy. The disease's course and its effects on the economy are both very unpredictable. The main preventive methods are to control social distance and isolation, which renders many economic activities unfeasible due to the high infectivity, high mortality, and incubation time of the disease. The world's merchandise commerce will collapse by 13% in 2020, with the global GDP falling by as much as 3%. Developing countries would be the worst affected, with losses averaging 4% but some suffering losses of over 6.5%.

INTRODUCTION

Worldwide, Covid-19 is proliferating quickly. From the moment when it was initially discovered, it was clear that At the end of 2019, Wuhan, China, experienced the new corona virus. The new corona virus will coexist with us for a considerable amount of time, as Tedros Adhanom Ghebreyesus noted. COVID-19 has spread due to stymied global economic growth. The main preventive methods are Consider infectious diseases to be a significant economic influencer. According to the WTO's annual Trade Outlook, which was released on 8 April, the COVID-19 pandemic will cause a global decline in merchandise trade of between 13 and 32% in 2020. According to WTO analysts, the decline will likely be greater than the decline in trade caused by the 2008–2009 global financial crisis. Particularly for electronics and automobile industries, trade is projected to decline even more sharply. The installation of transportation and travel limitations as well as the closing of numerous retail and hospitality outlets will have a significant impact on the services trade. According to predictions the GDP of developing nations would fall by up to 4% on average, while some may see losses of more than 6.5%, resulting in an overall GDP reduction of up to 3%.

MAKING ARMS AND TALKING PEACE: AN AMBIGUOUS SITUATION FOR THE WORLD POWERS AS INDIA ENTERS THE GLOBAL ARMS TRADE AS AN EXPORTER

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Abstract:

India is placed at a very strategic location on the globe. The country is covered by snow-capped mountains to its North while in the South, South-east, and South-west, its feet are washed by the waters of the Indian Ocean, Arabian Sea, and the Bay of Bengal. Dizzyingly enormous in its size and varied in topography and culture, the Indian Ocean is critical to global trade, security, and geopolitics. This makes both India and the Indian Ocean the important cog in the Super Powers' vested interest in this region. The 21st century is witnessing the unprecedented rise of India as a very important power that can make or break the dreams of those powerful nations. Moreover, the new India is daring to dream big, and laced with the theme of 'Atmanirbhar Bharat', it has started not only developing its own arms and ammunition to strengthen those countries that fit best in India's interest in this region but also walks on the Gandhian ideology of World Peace. The real thrill lies in watching India turning her stance from the Importer of arms and ammunition to a country that not only exports it but also makes it on her own. The current research paper will shed some light on the sudden rise of this subcontinent giant.

Keywords: Arms Trade, Peace, Arms Market, Superpowers, Exporter, Geopolitics

India is the land of Gandhi as well as Bhagat Singh, and it goes without saying that if it looks for peace then it also won't tolerate the threat to its land and maritime borders. India after gaining its independence from England, depended heavily on its erstwhile colonial master to feed upon its Army, Navy, and Airforce. But those weren't enough since most of those arms and ammunition were now obsolete and there was an urgent need to have modern and upgraded weaponry to be added to its kitty. It was USSR that stood behind fulfilling this dream. India had a very difficult relationship with Pakistan (Once part of undivided British India), time since it was separated from it. The bone of contention is the Kingdom of Kashmir, which Pakistanis tried forcefully to merge with it but the Maharaja of Kashmir signed the Instrument of Accession with India. This drew the clash between India and Pakistan in 1948. About 30% was forcefully captured by Pakistan while 55% remained with India after it successfully stopped the Pakistani intrusion and 15% remained with China after the disastrous Indo- China War of 1962. India and Pakistan will go on to fight wars in 1965, 1971, and

GLOBAL ENDEAVORS FOR THE SURROGATE MOTHERHOOD AND HUMAN RIGHTS

Dr Sheeba S Rajan

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Abstract

Existence, survival, and welfare are the three basic factors in human life. Survival depends on reproduction and its continuity. Medical science has made astonishing progress in parenting possibilities by helping the unfit survive and reproduce. The basic aspiration of human race is to live a good and happy life with family and procreate and pass on the evolution to the next generation. Surrogacy and Assisted Reproductive Technology serve as an alternative means to procreate children for such people who face medical infertility. The judicial approach till recently almost remained harsh in this respect. Recently this approach has undergone some changes. Since 2002 commercial surrogacy was, in existence in India. International and national requirements become a basic norm in the study of the subject of the artificial reproductive system. Various regulations are being applied by national laws for a healthy practice of surrogacy and artificial reproductive mechanism. The Surrogacy (Regulation) Act 2021, is being made a subject of this paper .The socio-economic, ethical, and human rights issues and these problems are not only in India but at the international level. The basic issues connected with artificial reproduction systems in different nations are similar in mechanisms, problems, and approaches. In India, the existing socio-economic situation does not encourage foreign couples to make use of artificial reproduction mechanisms within India. This has become a complex socio-economic issue and sometimes necessitates judicial intervention at many times. Almost all nations have accepted the principles of non-commercial surrogacy. There should be uniformity in surrogacy laws enacted by various nations if possible. Uniform standards for such arrangements in an international basis should be applied.

Keywords: The Surrogacy Regulation Act, Assisted Reproductive Technology, Human Rights, International law

INTRODUCTION

Reproductive health and healthy motherhood have been recognized both globally and regionally as a human development issue involving the right to the enjoyment of the highest attainable standard of health and other related human rights. Human rights generally refer to basic, inherent, original, inalienable, fundamental rights of man, not of the gift of the society or any authority but of the gift of God or nature which are essential for the fullest growth of a man as an individual and also for the fullest development of the basic personality of man.[1]The human rights and its implementation became very serious after the Second World War. Based on the reaction against atrocities against mankind by Nazis of Germany and the Fascist of Italy in the beginning period social, political and economic human rights received attention but later it was found that there are a large number of sections of marginalized people whose rights were not protected. The original human rights

APPICATION OF ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE MANAGEMENT.

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Priti Gaikar ,

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ABSTRACT

Technological innovations are coming out every day and have impacted almost every field in some of the last few decades. One of the technological innovations that is implemented indifferent fields is artificial intelligence. Artificial intelligence is the technology that is used for doing the tasks that require that extra level of intelligence to do the tasks, in other words we can also say that it is a tool designed to do the tasks that humans can do. So, here the question comes-why is HR different from any of the other software? The three main components that differentiate it from others are speed computation, large amount of quality data and the advance algorithms ituses.As we know artificial intelligence has been revolutionizing rapidly in different industries at such an alarming rate that one of the robot named Sophia was included in the panel and questions were pitched to her in the united nation convention that was held on sustainable development. This paper will focus on how AI has impacted the different HR functions in different organizations.

KEYWORDS:-

HR functions, artificial intelligence, organizations.

INTRODUCTION:-

Different HR activities that AI offers are easy transactions by self service, talent acquisition and recruiting process, policies and procedures, payroll etc. we have reached to an era in which the capabilities of artificial intelligence has been having a major impact on how the organizations are operating their businesses. Executives of human resource have major faith that the merging of AIand HR will result into better employee experience and efficient HR functions by providing better budget, better time management, more accurate information to help the management make better

KOREAN WAVE IN INDIAN MARKETS

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Abstract

The increasing Korean craze in Indian households has increased the threshold of Korean Products in India. Its market opportunity is great to great business and attract lots of people, supporters of Korean music, series, culture, food, drinks, products etc. the Korean wave has had a greater impact since the pandemic creating lots of opportunities. The awareness of the Korean entertainment industry as well as the Korean market updates are available with us. The understanding of various programs of Indo-Korea friendly concerts etc gives more boost to this research. This study explores the market segments that tend to consume this media while determining the reasons for their interest. It records the shift between western and Indian media towards Korean media and attempts to study the correlation of consuming k-pop to k-drama among Indian Youth. This study is a descriptive study conducted via an internet questionnaire distributed to a sample size of over 100 people all over India.

INTRODUCTION

Everyone is just caught in the whirl of hallyu — the Korean wave, or South Korea's pop-culture blitzkrieg. Considered something like Trojan horses for their growing soft power, South Korean cultural and pop culture exports have taken India by storm since the country went into one of the world's strictest coronavirus lockdowns last year.With the pandemic hit there were many things to do , one of such thing was to watch series and during this time the Korean craze increased in the Indian Markets be it movie, series, the actors or the music. They all were hit, recognized and well appreciated throughout the world.

Korean series

Korean series were a maximum hit and being Netflix their media sharing partner they had it all done. The fashion that came up with the series were searched by many in Indian markets thus giving rise to the introduction of new clothesline in street style statements. Series like Squid Game which was a very high rated series which worked throughout the episodes and using the common games of our childhood made us feel connected with Indian and Korean civilization. Another example if we take is of the series Vincenzo the cigarette lighter used in that series was very well searched on online as well as offline markets creating a big demand for it. Korean dramas exported to India tend to be well directed, have high production values and offer plots that conjure up worlds where the concerns are familial, familiar and mundane.

A STUDY ON PERSONNEL MANAGEMENT AT PARLE BISCUITS PVT .LTD

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Introduction

The personnel function is concerned with the procurement, development, compensation, integration, and maintenance of the personnel of an organization for the purpose of contributing toward the organization's major goals or objectives.

“Personnel management has to deal with planning, organizing, and controlling various activities of developing, maintaining and utilizing human resources in order to achieve the company objectives.

Objective of study

To examine how the company treated their employees during their tenure.

Data and Methods

Doctrinal and empirical research methodology was adopted. The study has taken a sample size of 30 from Parle Biscuit Pvt Ltd. Questionnaire was distributed. The study was done in Parle Biscuit Pvt .Ltd for a period of 2 months.

The only Mumbai employees of Parle Biscuit Pvt.Ltd are covered in this poll. 30 employees of Parle Biscuit Pvt.Ltd, regardless of age, gender, occupation, or profession, are being questioned for primary data using non-probability convenience sampling. A sample size calculator was used to determine the sample size. The supporting data for the study was acquired from publications such books, journals, websites, and newspapers. The chi square is a statistical technique used in Microsoft Excel together with percentage analysis and bar charts to assess the hypothesis.data analysis

Personnel Management

Definition

“Manpower management describes the processes of planning and directing the development, and utilization of human resources in the organization.”

“Personnel Administration helps in developing the capability of the employees so that they get maximum satisfaction out of their work and give their best efforts to the organization.

Personnel Management is concerned with the human constitute of the organization.

INDEX

RESEARCH PAPER: ARTIFICIAL INTELLIGENCE IN AUTOMOBILES: AN OVERVIEW

Sahil Nitin Kadu

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Abstract: This paper aims to introduce the idea of artificial intelligence to the automotive industry. Artificial intelligence has advanced significantly in recent years, and since that time, it has penetrated every aspect of the modern world. This essay sheds light on the current state of automotive technology and the need for a robust artificial intelligence in the automotive industry.

KEYWORDS: - Artificial Intelligence, Machine learning, Deep learning & Cognitive Computing.

Introduction:

The term artificial intelligence, or AI as it is referred to, is a technological revolution that is sweeping the globe today. The AI has advanced its roots in every field, including the software industry and the production industry. However, despite being a widely used technology today, many people are still unfamiliar with the true nature of this technology, so it is crucial to first define artificial intelligence. The simplest way to define artificial intelligence is as follows, despite the fact that there are numerous definitions for this technology: -

Artificial intelligence (AI) is the intelligence exhibited by machines or software through the study and design of intelligent agents, where an intelligent agent is a system that perceives its environment and takes actions that maximize its chances of success

Therefore, a machine is considered to have artificial intelligence when it exhibits behaviour that is similar to that of a human, such as learning, planning, reasoning, problem-solving, perceiving the environment, processing natural language, etc. The definition provided by John McCarthy, who came up with the term in 1955, is "the science and engineering of creating intelligent machines." According to Alphabet's executive chairman Eric Schmidt, AI could be used to address pressing issues like climate change, disease diagnosis, drug discovery, microeconomics, theorem proving, and protein folding. Similar hopes are expressed by Facebook's chief technology officer, Mike as being Schroepfer, that the power of AI technology can address global issues.

Strong AI, or AI that could essentially carry out any intellectual task a human could, was the focus of modern AI starting in the 1950s. Weak AI, or using AI techniques to solve specific problems, eventually emerged as a result of the lack of progress in strong AI. AI research was divided between these two paradigms up until the 1980s. However, machine learning emerged as a significant field of study around 1980, with the aim of equipping computers with the capacity to learn and construct models in order to perform tasks like prediction within particular domains.

Literature Review :

It is still unclear how these intelligent agents will help to solve more complex problems than the ones currently in existence, keeping in mind that the state of the art in AI today is to intelligently recognise images and intelligently play games, even though we are counting on Artificial Intelligence as the next tool to revolutionise the way we live, work, and interact with each other. This tool will primarily be enabled by machine-learning techniques. If we also consider the current climate and the individuals who are contributing to the advancement of artificial intelligence, we quickly identify the major players in the market

RESEARCH PAPER: SPEECH RECOGNITION SYSTEM

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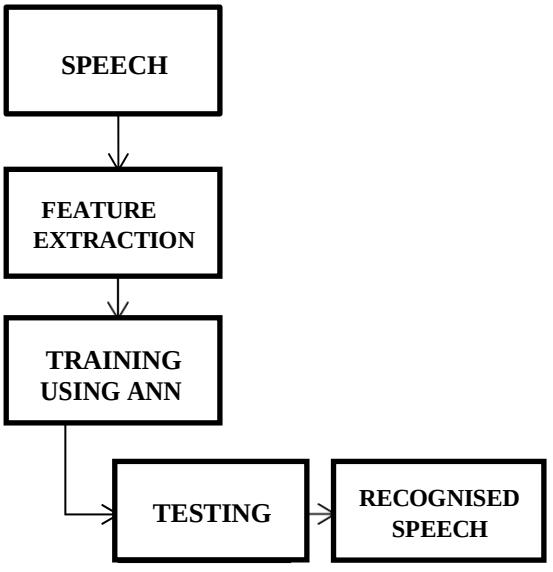
Abstract: Speech recognition software is crucial to every person's daily existence. It is a piece of software that enables voice control of a user's mobile device. Speech recognition software breaks down the audio of a speech into different sound wave forms, analyses each sound form, and then transcribe each sound into text using various algorithms to identify the most suitable word in that language. This essay will use examples from well-known systems like siri, Cortana, Google Assistant, Alexa, and Bixby.

Keywords: Acoustic Models, NLP, SIRI, Cortana, ALEXA, BIXBY, Google Assistant, Speech Recognition, Deep Learning

Introduction: With the use of speech recognition technology, a user can control an electronic device by speaking commands rather than pressing buttons, keystrokes, or other controls. Speech recognition software transforms the user's spoken words and phrases into a machine-readable format, enabling the user to effortlessly control the device using speech. Automatic voice recognition is another name for speech recognition (ASR). The fundamental goal of developing speech recognition is to make it so that anyone, technical or not, can use it with ease. Even someone who is illiterate and unaware of the device's components can use it with ease. In essence, speech recognition is made for a particular user. The speech-block model In Figure 1, a speech recognition system is displayed. Speech recognition is a developing field of study with significant applications in banking, advertising, healthcare, language acquisition, and many other areas. In speech processing, there are many different parameters, including pitch, duration, voice quality, intensity, voice activity detection, signal-to-noise ratio, and voice intensity. Speech recognition takes all of these parameters out of the algorithm so that it may carry out the user query on their behalf.

Fig.1 Speech Recognition System



MACHINE LEARNING IN IMAGE PROCESSING

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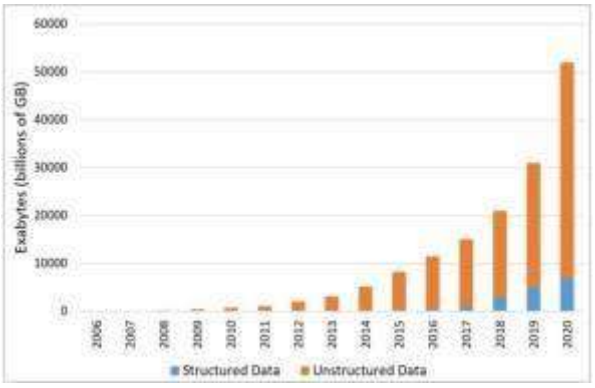
ABSTRACT :

Although many advanced machine learning techniques are difficult to use and require extensive understanding of advanced mathematics, statistics, and software engineering ,beginners can get a lot done with the fundamentals, which are freely available. However, Machine Learning is not for everyone, and it is not required knowledge for everyone. Just keep doing what you are doing if you are a successful Software Engineer who enjoys what you are doing. Some fundamental Machine Learning tutorials will not help you advance in your job.
Before starting a project, every machine learning engineer should think about scalability. Java makes it easy for machine learning engineers to scale their systems, making it an excellent choice for building large, sophisticated machine learning applications from the ground up. In general, learning the fundamentals of Python takes two to six months. However, in just a few minutes, you can learn enough to write your first short programme. It can take months or years to grasp Pythons huge collection of libraries. Machine learning is a branch of artificial intelligence that is defined as a machines ability to mimic intelligent human behaviour. Artificial intelligence systems are utilised to complete complex jobs in a similar manner to how humans solve problems.

KEYWORDS :PYTHON, COMPUTERS, AUTOMATION, DATA

INTRODUCTION :

Since the advent of computers and automation systems, the amount of data available in the world has grown exponentially. It is predicted to continue growing at a similar rate in coming years.



This _data-burst‘ along with increasing complexity and size of real-world problems has led to a requirement of problem-solving models that are self-sufficient. With major advances in computational power, execution of complex algorithms on large data sets has been possible in recent times.With the aid of machine learning (ML), artificial intelligence can be implemented such that a computer can "learn" on its own, without being explicitly programmed. When a machine has more experience performing a task, it grows better at it. This means that the observed "data-burst" can be fully utilised by machine learning. Machine learning concepts are used extensively in applications such as natural language processing, sentiment analysis, recommendation systems, prediction systems, and pattern/object detection to name a few.

LARGE CORPORATIONS USING MACHINE LEARNING

Machine learning has taken over a majority of the focus of corporate giants of the modern world. The public has been using products utilizing ML algorithms for quite a few years.
The most noticeable feature that Facebook has recently come up with is their facial recognition algorithm. Every time a photo is uploaded onto Facebook, the algorithm picks up on most, if not all, faces in the picture. It then runs each face through its

FAKE PRODUCT IDENTIFICATION SYSTEM USING BLOCKCHAIN

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ABSTRACT

As everyone is aware, there are fake versions of every brand today. Every well-known brand has knockoff producers who sell the same product at lower prices by compromising on quality. Even the original company's experts might not be able to tell the difference between their authentic products and imitations. What if we could identify authentic products using blockchain technology and put a QR code to them as they are being manufactured. The product's QR code will be connected to a Blockchain. The product information and generated QR code for the product can be stored in the database as blocks. People can now use their smartphones to scan the QR code, and their devices will indicate whether the merchandise is genuine or not. The scanned QR code will be compared to records in the Blockchain database. If the code matches, the buyer will be informed that the goods is authentic; if not, they will be informed that the product is counterfeit.

INTEX TERMS

Counterfeit product , QR code, Blockchain.

INTRODUCTION

When a technology or product is produced globally, risk factors like counterfeiting and duplication are always there; these factors can have an impact on the organization's reputation, its revenue, and the welfare of its customers. In order to determine whether a product is genuine or not, the supply chain contains a vast variety of items. Given that manufacturers of false or fraudulent goods struggle the most and suffer the biggest losses, we can use blockchain technology to assess the product's genuineness. Blockchain is a data storage technology that makes it difficult or impossible to change, hack, or cheat the system. In essence, a blockchain is a network of computers that copies and disseminates a digital record of transactions throughout the whole network. Each block of the chain contains many transactions, and every time a new transaction occurs on the blockchain, a record of that transaction is added to the records of all parties. Several individuals can operate a decentralised database using distributed ledger technology (DLT). Counterfeiting of goods is a problem that is helped by blockchain technology. Blockchain-based technology is more secure. Once the product is kept on the network, a chain will be built for all of its transactions, allowing for the preservation of all transaction records for both the product and its current owner. All transaction histories will be stored as blocks in the blockchain. The proposed system assigns a generated QR code to each product, which the end user can scan to access all the product's information. By scanning the QR code, we can determine whether a product is real or fake.

❖ **IMPORTANCE**

1. BLOCKCHAIN

A network of computers that copies and disseminates a digital log of transactions is a blockchain in its most basic form. Every time a new valid interest enters the ledger, a record of the mileage associated with it is added to each person's ledger. Every blockchain has multiple transactions.

DECENTRALIZED INTERNET

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ABSTRACT :

Decentralized internet, which is powered by the public rather than a hosting firm, increases the democ ratic nature of the internet. In order to aid in the transition away from the current centralized network, this research examines the numerous platforms made available by protocols that adapt to decentralize d networks. Along with the decentralized network, there are advantages that demonstrate the necessity for change. The internet was not initially intended to be centralized. This study examines the need for a return to a decentralized system by examining the operation of the network protocols. It is feasible t o uncover the driving forces behind a free and secure network that is not governed by or owned by an y single entity by examining the underlying protocols. This study looks into the causes of the demand for a decentralized network. As a result of study, attention is also focused on the applications of the d esign and how the current. The approach has been embraced by decentralized apps and protocols, who are using it to address the problems the centralized system has.

KEYWORDS : Decentralized internet, centralized internet, secure network, IPFS, SSB, IoTeX, BitTo rrent, Privacy, Dat

INTRODUCTION :

The internet started with the advanced research projects agency network (arpanet) during the y ear 1969 where a successful network connectio n between ucla and stanford research Institute was achieved. The two computers were able to send a message from one node to the Other ma king it possible to establish a unique transmissi on. The american department of Defense pione ered the main intention of creating the internet to create an impenetrable.

Communications network hence the need for it to remain decentralized. In terms of Security, t he decentralized network was more secure sinc e each node was independent without Reliance on another - peer-to-
peer connectivity. The extra dependency of peo ple on the internet Paved the way for it to be c ommercialized when the tech companies realiz ed that they could Make money out of the vent ure. Through the development of tcp/ip, www and html, Browser, search engines, and isps, th e internet would not have achieved mass adopti on. Hence arpa net and nsfnet were decommiss ioned to make way for the current Tech giants. Recently, the internet has become part of ordin ary people's lives, whether they are aware or U naware of its existence. Society seems to be ne tworked by an invisible wire considering the ra te At which information is disseminated nowad ays and the ease to reach out. From social medi a Influencers, gamers, and content creators, mo re people rely on the internet for their daily nee ds Or the paycheck at the end of the month. Th is shows just how the internet has transformed as Compared to a few decades ago, where peop le had to rely on the traditional approach to car eers And handling information. The internet su ddenly shifted from being decentralized to bein g Centralized. However, networking back is no t impossible in a world full of stand-alone

DECENTRALIZED FILE SHARING & STORAGE SYSTEM USING BLOCKCHAIN

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Abstract

In recent years, block chain has received increasing attention and numerous applications have emerged from this technology. In this idea we are using the decentralized blockchain technology approach. Many peer-to-peer file-sharing programs have been developed around the world. Some applications have entirely failed, while others are still alive and well. BitTorrent is the latter, and it is capable of organizing networks of untrustworthy peers (swarms) to cooperate in the distribution of file fragments to one another. When compared to HTTP, however, these applications cannot address all use cases. HTTP, as we all know, is one of the most widely used file distribution systems in the world. Because of the rapid growth of browsers and the great influence of HTTP, many systems are implemented using Browser/Server architecture rather than Client/Server architecture. IPFS aims to create a file system that connects all computer devices. Even though IPFS proposes putting the immutable, permanent IPFS links into a blockchain transaction, we believe several elements of IPFS can be improved by combining it with blockchain. Each node in this blockchain system has a copy of the hash key for the encrypted file that is stored on the IPFS server. The goal of this system is to use the blockchain concept to promote file sharing services with greater security and lower risk

KEYWORDS : Decentralized system, Blockchain, file sharing system ,IPFS,

Introduction :

Blockchain apps interact directly with blockchains or smart contracts to reach consensus on transactions, data, or code execution. The blockchain is stored on a distributed network of heterogeneous nodes that also process transactions and, if necessary, execute smart contracts. When working with large data files, the following issue arises. Because the files aren't required for the blockchain nodes to function, the blockchain becomes bloated, resulting in data being replicated on a large number of nodes. On the one hand, the blockchain stores large files inefficiently. Files must be divided and reassembled off-chain due to block size limits.

Additional data for reassembling files would also need to be saved, requiring either greater capacity or a separate system to provide the reassembly information. The data can be accessed more easily and the reassembly information can be saved if smart contracts are utilised to save file components directly. Using smart contracts to send and store large amounts of data, even in part, is expensive (for example, in terms of gas prices) and requires execution at each mining or verifying node. The cost of running the mining nodes, on the other hand, is increasing. As it moves through the network, the node must process and store additional data. As a result, mining nodes would need

HANDWRITTEN DIGIT RECOGNITION

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Abstract The project work is a way for one to put their knowledge into practise. The documentation paves the path for the idea of presenting the ideas and upgrading different techniques into the project. This practical project, "HANDWRITTEN DIGIT RECOGNITION," is based on several current computer science concepts. The world is constantly looking for novel computer science techniques to transform human limits into machines and produce ever-more precise and insightful data. Artificial intelligence and machine learning only have positive-sloping paths; they do not have any negative paths. This project is a very simple illustration of those ideas. This research focuses on the widely used neural network learning method.There are many ways to accomplish a goal and get the intended result, but in machine learning, neural networks provide a means by which the computer learns how to get the result. This project was developed using statistical modelling, computer vision, and machine learning libraries, all of which have undergone extensive research. I made an effort to guide these projects towards the implementation of new algorithm, updated methodologies, and upgrades. This project offers a clear description, and it can be developed further into more sophisticated machine learning applications.

Introduction

The project uses the OCR (Optical Character Recognition) technique, which integrates several computer science research areas. The goal of the project is to take a photo of a character and then analyse it so that it can identify the character's image much like the human brain does with different numbers. The project includes a thorough understanding of image processing techniques, a significant machine learning research area, and the neural network, a machine learning building block.

The project is divided into two sections: (1) Training and (2) Testing. The aim behind the training component is to instruct a child by presenting them with numerous sets of characters that are somewhat similar but not exactly the same and telling them that the result of this is "this." To train the freshly constructed neural network with so many characters, one must use this concept. This section includes a few new algorithms that were developed independently and upgraded as the project required. A fresh dataset is tested in the testing section. This section is always followed by the training section. The youngster must first be taught how to recognise the character. The next step is to take the test to determine whether or not the response was correct. If not, you must train him more rigorously by providing additional datasets and entries. The algorithm must also be tested, just like that. There are many parts of statistical modeling and optimization techniques which come into the project requiring a lot of modeling concept of statistics like optimizer technique and filtering process, that how the mathematics (How to implement a neural network intermezzo 2 Peter Roelants (2016)) and

Artificial Intelligence and Machine Learning in Food Industries: A Study

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Abstract The overuse of artificial intelligence (AI) is silently reducing human-to-human interaction and hastening the automotiveization of the globe. These developments are geared towards quick mass manufacturing and precise yet organised supply chains and delivery to please every end user, as their contentment provides many justifications for why a specific industry should rule and dominate the worldwide market. Some of the most well-known high-end technologies that make use of artificial intelligence (AI) and machine learning (ML) for manufacturing, processing, and delivering qualitative and quantitative products with little expenditure of money, labour, or time are robots and data processing mechanisms. Even new or tiny businesses, including cafes, fast food outlets, restaurants, etc., are using these technologies today to stand out from the competition and expand quickly.

Introduction

Before we discuss the food's quality, it is important to note that any edible and nutritious food provides a basis for at least surviving. The food industries are responsible for acquiring unprocessed food from farmers and regional producers, which they subsequently refine, prepare, and package into a suitable edible source for their clients. Second, the desire to improve the quality of the same food is a critical concern and the most crucial element for every industry that processes food. . If a customer spends money on a certain food item, or at the very least on its basic materials, it most often indicates a negotiation that needs both qualitative and quantitative outcomes. The standardisation of a particular product is being evaluated by sellers and purchasers periodically in order to generalise expertized nonsystematic principles and stop using classifier preparations. This means that the modern market, which has researched consumer behaviours and demands for suitable execution, will take care of quantitative quality grading systems. This will be beneficial for both marketing managers and customers. The food sector is currently unable to apply these classifier preparations because they are expensive and time-consuming, leaving behind ineffective training techniques that are prone to mistakes that repeat themselves and undermine company convictions. Contrarily, food firms are implementing more affordable and accurate tests to challenge various human tendencies, ensuring that there are very few mistakes made repeatedly while doing food quality checks.

Literature Survey

Food revenue forecasting is one of the most important difficulties that the food industry frequently faces because any decision made here will determine the company's success or failure in the market in the next days. It does not, however, always remain volatile.

ROBOTICS-NEW ERA

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ABSTRACT:

The field of robotics is entering a new era, characterized by unprecedented advancements in technology and a growing demand for automation in various industries. These advancements are driven by the integration of artificial intelligence, machine learning, and computer vision, leading to robots that are more advanced, adaptable, and capable of performing complex tasks. The new era of robotics also includes the development of collaborative robots, which work alongside human workers to increase efficiency and productivity. Additionally, the use of robotics in healthcare is revolutionizing patient care by enabling the automation of routine and repetitive tasks, freeing up medical personnel to focus on more critical tasks. The new era of robotics is expected to bring significant benefits to society, including increased efficiency, reduced costs, and improved quality of life. However, it also presents challenges, such as job displacement and ethical considerations, which must be addressed to ensure that the benefits of robotics are realized for all.

INTRODUCTION:

The field of robotics has undergone significant advancements in recent years, bringing us to the brink of a new era in robotics technology. The integration of artificial intelligence, machine learning, and advanced robotics engineering has created robots that are capable of performing a wide range of tasks with increasing autonomy and precision. This has led to the development of robots that can be used in a variety of industries, including manufacturing, healthcare, retail, and even domestic use.

The new era of robotics has also brought about significant advancements in areas such as human-robot interaction, where robots are now able to understand and respond to human gestures and emotions in a more natural and intuitive way. This has the potential to revolutionize the way we interact with technology, making it more accessible and easier to use for everyone.

Moreover, the rise of robotics has also created new job opportunities, as well as new challenges, particularly in terms of ethical and legal considerations. As we enter this new era of robotics, it's important to consider the impact these technologies will have on our society and work towards creating a responsible and sustainable future for all**.**

LITERATURE:

The dawn of a new era has begun for the field of robotics, with advancements in artificial intelligence, machine learning, and advanced sensors revolutionizing the way robots are designed and utilized. The new era of robotics is marked by the development of robots that are more autonomous, sophisticated, and capable of performing tasks that were once deemed impossible.

One of the key features of this new era of robotics is the ability of robots to learn from their environment and adapt to changing

THE INFLUENCE OF AI AND IOT ON BUILDING MANAGEMENT AND MAINTENANCE

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ABSTRACT:

The advancement of technology has had a profound impact on various industries, including the building management and maintenance sector. The integration of artificial intelligence (AI) and the Internet of Things (IoT) has revolutionized the way buildings are managed and maintained. This study explores the influence of AI and IoT on building management and maintenance by examining the benefits, challenges, and potential impact on the industry. The research findings indicate that the use of AI and IoT has resulted in improved efficiency, reduced costs, and enhanced sustainability in building management and maintenance. Additionally, the study highlights the need for continuous research and development in the area of AI and IoT to ensure that the benefits are maximized and the challenges overcome. Overall, the study concludes that AI and IoT have the potential to greatly enhance the building management and maintenance industry and that further investment in this area is crucial for the sector's future success.

INTRODUCTION:

The advancement in technology has brought about significant changes in various industries, and the building management and maintenance sector is no exception. The integration of Artificial Intelligence (AI) and the Internet of Things (IoT) has revolutionized the way buildings are managed and maintained. With AI and IoT, building management and maintenance have become more efficient, cost-effective, and sustainable. AI and IoT have introduced automation and real-time monitoring capabilities that have made it possible to predict and prevent maintenance issues, optimize energy usage, and enhance the overall security of buildings. This paper aims to explore the influence of AI and IoT on building management and maintenance and how these technologies are transforming the industry for the better.

LITERATURE:

The field of building management and maintenance has seen significant advancements in recent years due to the integration of artificial intelligence (AI) and Internet of Things (IoT) technologies. These advancements have not only improved building performance, but have also revolutionized the way buildings are managed and maintained. In this literature review, we will examine the impact of AI and IoT on building management and maintenance and explore the various applications and benefits of these technologies in the industry.

One of the key areas where AI and IoT have had a significant impact is in energy management. The integration of smart sensors and energy management systems has enabled building managers to monitor energy usage in real-time, identify energy waste and make informed decisions to

CURRENCY DETECTOR FOR VISUALLY IMPAIRED

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ABSTRACT

Despite the quick increasing application of Master cards and other electronic sorts of payment, money is still generally operated for ordinary interactions because of its accessibility. However, visually impaired people may suffer from knowing each currency paper apart. Currency Recognition Systems (CRS) can be used to help blind and visually impaired people who suffer from monetary connections. In this paper, a Currency Detector System based on OrientedFAST and rotated YoloV3 algorithm is projected. The proposed system is applied to Indian paper currencies counting six kinds of currency papers. In the projected work, we will develop a system to detect currency for Indian Notes. First, take the input of the given image and pre-processed the given image and alter the RGB image into the grayscale image. After pre-processing, apply a Sobel algorithm for the abstraction of the internal as well as the external boundariesof the image. Gathering will be done using the YOLO V3 algorithm. In which it methods the gathering of feature one by one. After that predictable the input image as a 200, 500, or 2000and equivalence the structures of the image and classified it as 200, 500, 2000, or not with the help of the YOLO V3 algorithm.

Keywords: Currency Recognition, YoloV3 Algorithm, RGB Image

1. INTRODUCTION

The capacity to classify currency (both coins and bills) without human input is unfavourable for several applications. Probably the most important one is supporting visually impaired people. According to the GOVERNMENT OF MAHARASHTRA, the number of visually disabled peoples was institute to be higher. Round 165 peoples per lakh peoples were visually disabled. Between them 82 percent were blind and 18 percent had low vision Recent change of laptop stands makes the idea of currency recognition with a laptop an tempting one. In this study, we progress a simplestyle of template similar with the SURF key point indicator for the Windows platform. We are on behalf of an method in which currency is documented by the camera and theresult is sent through audio devices. One of the main problems battle by people with visual impairment is the ineffectiveness to classify the paper currencies due to the estimate of paper texture and size between the different currencies.Hence, the role of this system is to develop a solution to resolve this trouble to make blind people feel safe and resolute in the financial method. There are two types in the currency recognition research field; Scanner-based andCamera-based. Scanner-based systems fictionalto scan the whole paper. Such systems are appropriate for the apparatus of currency securities. While camera-based systems except catching the currency by a camera that may capture a part of the currency. Most related works in certification dispense with the scanner-based

Security Challenges in IoT

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Abstract: **The Internet of Things (IoT) is one of the technologies that has gained the most traction in recent years across a range of applications. IOT has manifested as the most cutting-edge technology, enabling billions of gadgets to connect to the internet and enable human-free existence. Wired and wireless connections allow for the communication, processing, and monitoring of various real-world situations. Strengthening security and avoiding ransomware attacks have emerged as major problems as smartphones, computers, and sensors within the Internet of Things (IoT) paradigm growing additional and additional. Because IoT devices are not compatiblewith traditional-based established security standards, implementing the IoT systemposes security and privacy difficulties. In thispaper, a comprehensive assessment of the safety- associated contests and causes of danger in theIoT applications is presented. In this paper we evaluation and discover the main tasks and refuge matters checking the growing of IoT-based clever lattice networks. We have given an overview of IoT's general information security history before moving on to the issues that IoT will face in terms of information security.This paper will analyze existing literature related to various security threats in IoT, security issues in different applications of IoT and present summary of the study.**

1. INTRODUCTION

The Internet of Things (IoT) is a network of intelligent things that communicate with one another online. To collect the information, the smart things are deployed in a different setting, and a few events are set off. Smart cities, smart homes, intelligent transportation systems, agriculture, hospitals, supply chain systems, earthquake detection, and smart grid systems are some examples of IoT applications. The devices should be able to directly communicate with other devices on the Internet in addition to being associated to the Net and other limitedplans. In addition to the connected devices or objects, the idea of social IoT is also starting to take shape. One of the most recent technologies to gain traction, the Internet of Things has a wide series of potential tenders. There are still issues with security and privacy in many application areas. With such a broad range of IoT applications comes the concern over privacy and security. Emerging IoT apps cannot achievehigh demand and may lose all of their promise without a trusted and compatible IoT ecosystem. IoT security challenges include privacy concerns, authentication problems, administration problems, information storage, and more in addition to the usual security issues that the Internet, cellular networks, and WSNs face.

IoT devices are proliferating and connecting the physical and digital worlds, which generates a variety of new and complex security risks. Wider adoption of IoT applications will be significantly hampered if those security problems cannot be appropriately addressed. For instance, when it comes to two of the usual IoT application areas, namely Smart Home and Smart

Healthcare, it is crucial to protect both the sensitive data travelling throughout the system and the system's crucial assets.

We believe that a thorough understanding of IoT security difficulties will lead to improved security solution design, we intend to perform a full analysis of IoT security challenges in this

CUSTOMER SERVICE USING AI CHATBOT

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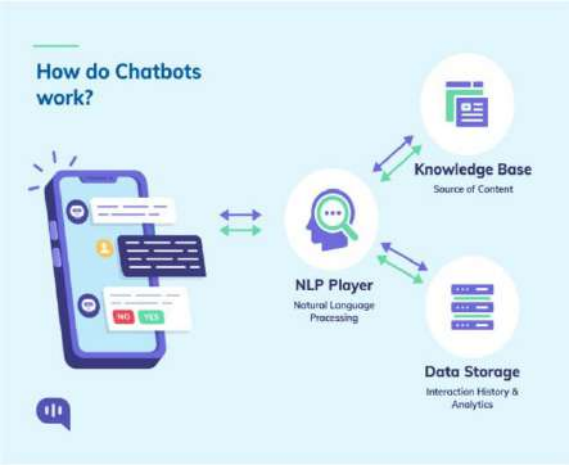
Abstract: This Research looks into the use of AI chatbots in customer support. The study's goal is to assess chatbots' performance in managing customer enquiries and complaints, as well as their effects on customer happiness and loyalty. Data will be gathered through surveys and customer interactions with the chatbot. Communicating with clients via live chat interfaces has grown in popularity as a way to deliver real-time customer care in e-commerce environments.

Introduction:

Now Internet has become an indispensable element of our everyday lives. As a result, this has had a tremendous impact on how consumers make commercial purchases today, rapidly expanding what is now known as electronic commerce, or e-commerce. Communicating with clients via live chat interfaces has grown in popularity as a way to deliver real-time customer care in e-commerce environments. Customers can utilise AI chatbots for customer care in the following ways on ecommerce websites: (i)Responses to frequently requested questions: Chatbots can answer typical inquiries regarding the website, items, shipping, refunds, and other issues in real time. (ii)Order tracking: Chatbots can provide real-time updates on an order's status and tell customers when their order has shipped or delivered. (iii)Returns and exchanges: Chatbots can assist customers return or exchange a product by offering return instructions and tracking the status of the return. (iv)Resolving Problems: Chatbots can assist consumers in troubleshooting issues with their orders, such as missing or damaged items. (v)Chatbots can give customer support assistance 24 hours a day, seven days a week, so clients can get help whenever they need it. Chat services have become the main method of obtaining customer help during the previous decade. Human chat service operators have been often supplanted in recent years, owing to technological breakthroughs in artificial intelligence (AI), by conversational software agents (CAs) such as chatbots, which are systems meant to connect with human users using natural language.



They are expected to operate as company representatives to assist consumers online in solving problems, delivering information, and providing advice, despite long contact centre line-ups, which are

CLOUD GAMING

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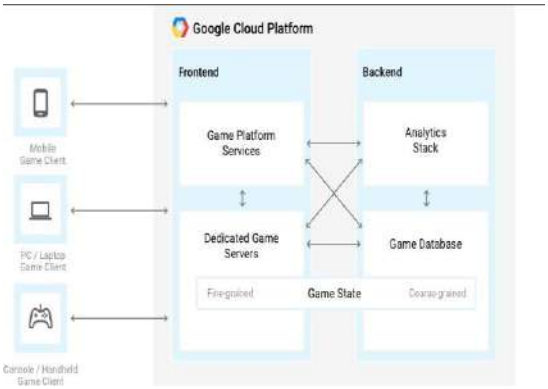
Abstract: A new method of providing players with a high-quality gaming experience is through the use of the cloud. It is not necessary to download and install games on a computer or console. To interact with the games, code is performed on a variety of devices. Since the late 2000s, cloud gaming has received a lot of attention from both the academic and business communities due to the widespread use of high-speed networks and cloud computing. This survey examines how cloud gaming began and evolved over time, as well as contemporary improvements in cloud gaming.

Introduction:

Cloud gaming refers to the practice of playing video games on distant servers housed in data centers. Games don't need to be installed and downloaded onto a PC or console. Instead, streaming services use an app or browser installed on the receiver device to transmit game data, which requires a constant internet connection. Despite seeing and interacting with everything locally on your device, the game is rendered and played on a distant server. It works similarly to Netflix or any other streaming service. The sole distinction is that the server hosting the video stream can now detect and respond to your inputs. Thus you don't need a strong RTX 30-series graphics card, nor a new Xbox Series X or PlayStation Series. All you need for cloud gaming is a strong internet connection. The cloud gaming platform runs computer game programs, which are separated into two key components: (i) game logic, which is responsible for converting gamer instructions into in-game interactions, and (ii) scene renderer, which is responsible for generating game sceneries in real-time. The cloud gaming platform includes a command translator, video capture, and video encoder. The cloud gaming platform, as represented in this diagram, provides video frames to and receives user inputs from thin clients used by players to play games. It is a thin client because it only requires two low-complexity components: (i)a command receiver that links to game controllers such as gamepads, joysticks, keyboards, and mice, and (ii) a video decoder that can be achieved using mass-produced (low-cost) decoder chips. Because interactions between the cloud game platform and thin clients are through the best-effort Internet, maintaining real-time computer games is difficult.



A Survey on Big Data Analytics: Challenges, Open Research Issues and Tools

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ABSTRACT

Daily production of enormous gigabytes of data is produced by modern information systems and digital technologies like the Internet of Things and cloud computing. This enormous volume of data needs to be analysed at many different levels in order to extract information that may be used to make decisions. Big data analysis is therefore a current subject of research and development. Investigating the effects of big data difficulties, active research questions, and related tools is the purpose of this study. This article offers a paradigm for examining big data at different phases. Additionally, it gives researchers additional chances to create a solution based on the difficulties and unresolved research problems.

Keywords—Hadoop; Massive data; Structured data; Unstructured Data; Big Data Analytics

INTRODUCTION

Big data has expanded as a result of the quick shift from analogue to digital worlds, where data are produced from various sources. It enables evolutionary progress in several domains through the gathering of datasets. It typically refers to a group of enormously complicated datasets that are difficult to manage using conventional database administration software or data processing apps. These come in structured, semi-structured, and unstructured formats in petabytes and higher. The formal definitions range from 3Vs to 4Vs. The 3Vs stand for volume, velocity, and variety. Volume is the massive amount of data generated each day, whereas velocity is the rate of growth and the speed at which the data are gathered for analysis. Information on the various types of data, including semi-structured, unstructured, and structured data, is provided by variety. The fourth V stands for velocity, which also refers to accountability and availability. Processing data at rapid speeds, enormous volumes, and a variety of traditional and computationally clever techniques is the main objective of big data analysis. The accompanying graphic, Figure 1, shows the definition of big data. However, the precise meaning of big data is unclear, and It's generally accepted that it depends on the issue at hand. We will gain from this creative and economical approach's better decision-making, insight finding, and optimization.

Big data is expected to reach 25 billion by the year 2015. From the perspective of information and communication technology, big data is a potent tool for the following generation of information technology enterprises. These sectors, which include big data, cloud computing, the internet of things, and social business, are mostly constructed on the third platform. Data warehouses have traditionally been used to manage the large dataset. Finding exact information from the enormous data that is accessible in this situation is the main challenge. The approaches to data mining that have been outlined typically struggle to handle huge datasets. The primary problem with big data is the lack of coordination between database systems and analytical tools like data mining and statistical analysis.We frequently encounter similar challenges while trying to find and convey information for its practical uses. A basic problem is how to statistically define the fundamental properties of huge data. The development of big data computing models and algorithms will be guided by research into the complexity theory of big data, which will also help with the underlying properties of big data and the emergence of complex patterns in it. On big data and its tendencies, a large number of scholars have done considerable research.

It should be remembered, nonetheless, that all information is offered as techniques. Additionally, we list open research questions pertaining to big data. To further explain this, the study is broken into the sections below. Section 3 provides the open research questions that will help us analyse massive data and extract relevant information from it. Section 4 goes into great length on big data technologies and methods. The section 5 ends with notes to provide an overview of the findings.

CHALLENGES IN BIG DATA ANALYTICS

Numerous industries, including public administration, retail, biochemistry, healthcare, and other scientific investigations, have amassed vast volumes of data recently. Web-based applications like social computing, online text and documents, and internet search indexing commonly deal with big data. While social computing encompasses social network analysis, online communities, recommender systems, reputation systems, and prediction markets, internet search indexing includes ISI, IEEE Xplorer, Scopus, and Thomson. Bloomberg, etc. Big data presents fresh chances for young researchers to work on

Agriculture Leaf Disease Detection Using Machine Learning

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ABSTRACT

In agriculture, early disease identification is critical for a productive crop production. The crop quality of agricultural plants is impacted by diseases like yellow bent leaves, late blight, septoria leaf spot, and bacterial spot. Automatic ways for classifying leaf illnesses make it easier to act after spotting the diseases' symptoms. The identification of leaf diseases using a Convolutional Neural Network (CNN) model is presented in this research. The collection includes 500 or more pictures of leaves that have four illness symptoms. For automatic feature extraction and categorization, we have trained a CNN model. Our model applies filters to three channels based on RGB components. For the study of plant leaf diseases, colour information is used.

INTRODUCTION

Pests and diseases cause crops to be destroyed or cause a plant to lose a portion of its structure, which lowers food supply. For identifying diseases, techniques including polymerase chain reaction, gas chromatography, and thermography can be utilised. These methods take a lot of time and are not cost-effective. Our goal is to identify the disease that has been introduced in a plant by observing its shape using image processing and machine learning. For detection, you can use Random Forest, Artificial Neural Networks, Support Vector Machines (SVM), Fuzzy Logic, K-Means Method, and Convolutional Neural Networks. This system is capable of telling healthy leaves apart from harmful ones. It makes it possible for you to spot ill plants, preventing the loss of your entire crop. Image processing is used to remove features from images.

LITERATURE REVIEW

Plant disease detection identifies the spread of disease in different types of plants. Plant disease detection makes use of image processing to observe the morphology of plants in order to look for diseased leaves. Minimising the amount of user involvement required for the system to function. The scanning and disease detection of this application make it real-time.

EXISTING SYSTEM

In order to distinguish between healthy and unhealthy leaf from the generated data sets, the existing system uses Random Forest. A forest of decision trees is built during the training period as part of the random forests learning technique, which can be used for classification, regression, and other tasks. It employs a number of implementation phases, including dataset construction, feature extraction, classifier training, and classification.

To categorise photos of damaged and healthy leaves, the produced datasets of sick and healthy leaves are combined and trained using Random Forest.

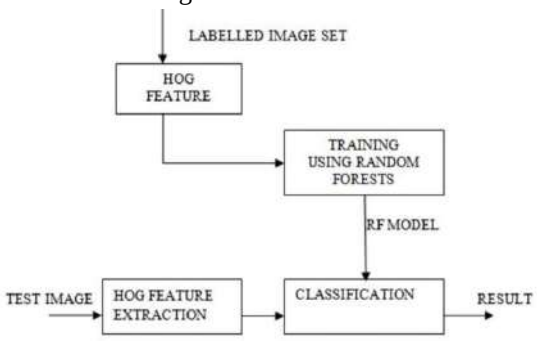

fig 1. Architecture Of Random Forest Method

The current system only supports a single plant and handles modest datasets. The image must first be pre-processed using image processing before the random forest method can use it.The CNN algorithm, which offers greater flexibility and reliability, can address all of these shortcomings.

RESEARCH PAPER: BIG DATA ANALYTICS IN INTELLIGENT TRANSPORTATION SYSTEM

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Abstract : Big data analytics is becoming a focus in intelligent transportation systems (ITS), which can be seen in many projects around the world. The produced big data will have very great impacts on the application and design of the intelligent transportation systems, which makes ITS safest , more efficient, and profitable. This paper focuses on the history and characteristics of big data analytics and intelligent transportation systems. Several case studies of big data analytics applications in intelligent transportation systems , includes road traffic floor prediction , road traffic accident analysis , public transportation service plan . In this paper it is discussed about some open challenges of using big data analytics in ITS. This research paper focuses on the role of big data in shaping the intelligent transportation systems and road safety sector.

Keywords : Big data analytics , Intelligent transport system , Machine learning , Transportation.

INTRODUCTION :

Big data analytics has become popular in industry. It represents large and complex data sets obtained from various resources. Many data processing. techniques contains big data techniques including Machine learning , Data mining , Artificial. intelligence etc. Big data is the process of analysis of data to generate knowledge and hidden patterns. Big data analytic is becoming a focus in intelligent transportation systems (ITS), which can be seen in. many projects around the world. Intelligent transportation systems will produce a large amount of data. The produced big data will have very great

This paper focuses on the role of big data analytics in intelligent transportation system and road safety sector .

Intelligent transportation system was early Developed in 1970s. In it data can be obtain From diverse sources such as , sensors , GPS Smart card etc .

Many people use it in different fields.

•**Big data analytics:**

Big data analytics is a process to analysis of data to generate knowledge and hidden patterns. Big data provides the intelligent

RESEARCH PAPER: CLOUD COMPUTING CRYPTOGRAPHY

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Abstract : Cloud computing is a technology that provides varoius services through internet to cloud users and it follows pay-per-use basis that means users have to pay only for the service he has used . Cloud computing provides various resources through services suc as SaaS , PaaS , IaaS .There are two types of models in cloud computing they are deployement models and service models . Deployment models consists of public cloud , private cloud , Community cloud and Hybrid cloud. Cloud Service models consists of three they are SaaS (Software-as-a-service) , Paas (Platform -as-a-service), IaaS (Infrastructure-as-a-service) . Cloud computing has varoius features that makes it important. Cloud security is one of most important feature of cloud computing.Data privacy in it allows you to store data, collect it , Share and transfer it over the cloud without putting the personal information or privacy of the personal data into a risk. We will get least security in IaaS .We get minimal security in IaaS. (Infastructure as a Service) and most of it with a SaaS provider. In this paper we are going to concentrate on understanding the cloud security promblems and issues by using or suggesting cryptography algorithms to ensure the data security in cloud .

Keywords : Cloud computing , Cryptography , Security promblems , Security algorithms , Encryption , decryption .

INTRODUCTION :

Cloud computing is a technology that provides varoius services for eg. Services , softwares,networks ,storage through internet to cloud user. It follows pay-per-use that means user have to pay only for the service he has used .The main concern of Cloud computing is to provide security. Symmetric algorithms includes AES , DES , AND 3 DES .In this paper we are concentrate upon understanding cloud security promblems and by suggesting the cryp-tography algorithms to increase security concern. Cloud security is ensure by securing the data and by using the Cryptography algorithms. The two types of cryptography algorithms are : Symmetric encryption key algorithm and the Asymmetric encryption key algorithms like RSA and Eliptic curve cryptography.

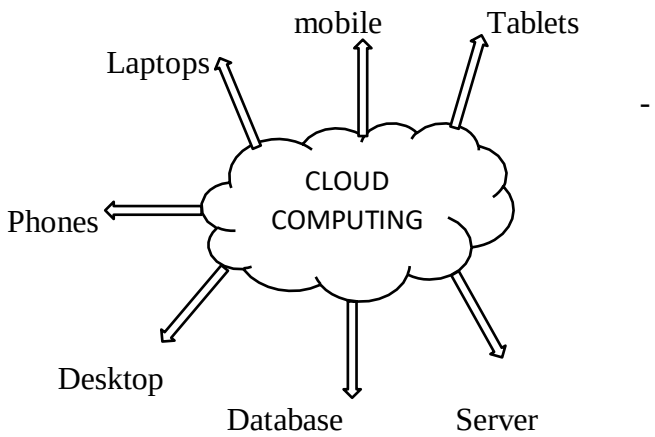

Fig.1.Cloud computing.

DETECTING IMPERSONATORS IN EXAM USING ARTIFICIAL INTELLIGENCE

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Abstract— This abstract outlines a proposed research project to develop an artificial intelligence (AI) system to detect impersonators in exams. The system will use facial recognition technology to identify individuals and compare their image to a database of registered exam-takers. Additionally, the AI system will utilize machine learning to identify any discrepancies in the exam-taker's behavior and/or answers. The data will be analyzed to determine if a person is an impostor and alert the examiner if any suspicious activity is detected. The results of this research will be used to inform future implementations of impersonator detection systems and improve the accuracy of the results.

Keywords: ***Artificial intelligence, facial detection, Biometric Authentication***

INTRODUCTION

The increase of malpractices in the examinations has increased rapidly in the ongoing years and has been in scene from many years. The process of impersonation detection in the examinations has become important and effective to use to provide a better way of conducting cheat-free examinations. This can provide a good way of examination handling process. According to the latest news reports, there were found several impersonators in the SSC CGL examinations conducted by the central government of India. This issue hasn't yet found a solution. This project can solve this problem, with effectiveness and less manpower. Nowadays the advancement of Machine Learning and Artificial Intelligence technology has increased gradually which makes it easy to solve this type of problems. Using Artificial Intelligence (AI) to detect impersonators in exams involves the use of advanced technologies to identify individuals who are not the author of the test material. By analyzing behavioral patterns, biometric data, and other identifying characteristics, AI can detect when a person is not the true test-taker and help to prevent cheating in exams. AI can also be used to identify individuals who have access to restricted test material, such as advanced questions or answer keys, and alert authorities. AI can also be used to scan for plagiarism and other forms of academic dishonesty. Overall, AI is an effective tool to detect and prevent cheating in exams.

BACKGROUND

The use of Artificial Intelligence (AI) to detect impersonators in exams is a relatively new concept in the field of security. AI can be used to detect a variety of exam cheating methods, including impersonation and identity fraud. AI can be used to analyze biometrics such as facial recognition, fingerprints, and iris scans, as well as behavior analysis such as keystroke dynamics. AI can also be used to exploit data from social media accounts and other online sources to verify the identity of a test taker. AI can help to identify suspicious behavior and patterns associated with impersonation and identity fraud. AI can also be used to flag and investigate suspicious activity, alert the appropriate authorities, and help ensure a secure and fair testing environment.

LITREATURE SURVEY

AI has the potential to revolutionize the way impersonation is detected in exams. AI can be used to analyze the behavior of each student during an exam and compare it to known patterns of authentic behavior. Through this comparison, AI can determine if a student's behavior is anomalous

ARTIFICIAL INTELLIGENCE IN MENTAL HEALTHCARE

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Abstract— This abstract outlines about Artificial intelligence (AI) being used in mental healthcare to improve the accuracy of diagnostics and treatment, reduce the cost of care, and improve access to care. AI-driven applications such as computerized cognitive behavior therapy (CCBT) and natural language processing (NLP) are being used to support mental health professionals in their work. AI can also be used to analyze large amounts of data to identify patterns that may help clinicians better understand mental health conditions and develop more effective treatments. AI can also be used to detect early signs of mental health issues, allowing for early intervention and preventive care. In addition, AI-driven chatbots and virtual coaches can provide mental health support to individuals.

Keywords: ***Artificial intelligence, Mental Healthcare, Patients, Providers***

INTRODUCTION

The introduction of artificial intelligence (AI) in mental healthcare is a relatively new concept that is steadily growing in popularity. AI is effectively being used to help diagnose mental health disorders, provide personalized treatments, and monitor the progress of patients. In addition, AI is also being used to help reduce the workload of mental health professionals by providing automated administrative tasks and freeing up time for them to focus on the more important aspects of their job.

AI is being used in mental health to provide a more accurate diagnosis of a disorder. AI algorithms are able to analyze medical data, such as symptoms and results from laboratory tests, to more accurately identify mental health conditions. AI also allows mental health professionals to provide more personalized treatments by using machine learning to analyze a patient's data and determine the best treatment plan based on the individual's needs.

AI is also being used to monitor a patient's progress. AI algorithms can track a patient's symptoms and responses to treatment to provide a more comprehensive picture of their mental health. This allows the clinician to make informed decisions about the best course of action for the patient.

Finally, AI is being used to automate administrative tasks for mental health professionals, such as scheduling appointments, filling out forms, and managing patient records. This allows mental health professionals to focus more of their time on providing better patient care and less time on administrative tasks

BACKGROUND

The use of artificial intelligence (AI) in mental healthcare has become increasingly popular in recent years. AI is being used to assess, diagnose, and treat mental health issues, including depression, anxiety, and addiction. AI-powered algorithms can analyze large amounts of data, such as patient records and medical histories, to identify patterns and correlations that can help inform treatment decisions. AI can also be used to monitor patient progress and adjust treatment plans accordingly. AI-powered chatbots can provide mental health support and therapy to those who may not have access to traditional care or who may be reluctant to seek help. Finally, AI-powered systems can be used to provide personalized recommendations and resources to patients. AI has the potential to revolutionize mental health care, making it more accessible and efficient.

USER BEHAVIOR ANALYSIS WITH MACHINE LEARNING

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Abstract— This abstract outlines a proposed research project to develop an artificial intelligence (AI) system. This project presents a way to analyze the behavior of users working in a distributed computing environment using machine learning algorithms. The goal is to differentiate between group of close users. This group consists of users with similar behavior. Events related to user actions are recorded and sent to a database. An approach was developed to define user groups. A non-parametric probability density estimation method is used to predict application launches and session opens per user. These algorithms have been implemented and has been shown to be effective across virtualized environments.

Keywords: ***Artificial intelligence, User behavior Analytics,Machine Learning***

1. INTRODUCTION

User behaviour analytics is the process of collecting and organizing data about a user's actions to determine how they use your application or software. It allows you to see which features are most popular with your users and where they are struggling.

Behaviour analytics gather key metrics and information about users' interactions with your site. It allows you to monitor user engagement, measure customer satisfaction and take proactive steps in improving your website's overall performance.

User analytics is also known as visitor analytics, user experience analysis, or web analytics. All of these terms describe the same type of analysis collected from website visitors using different tools and methods.

Any company that creates applications, learning management systems, or services, including e-commerce and social networking sites, can use Behaviour Analytics software. Although online applications are more widespread, it can be utilised for offline applications as well.

User behaviour analytics be used. You may deliver better service and higher-quality products by using this technique to better understand your clients' preferences.

2. LITREATURE SURVEY

Artificial intelligence known as machine learning gives readily available computers the ability to be learned without being explicitly programmed. Machine learning is focused on the adjustments that can be made to computer programmes when they are exposed to novel input without protection. Reinforcement learning, unsupervised learning, and supervised learning are the three main types of machine learning algorithms.

In supervised learning, the computer is instructed or trained using information that has been appropriately labelled, meaning that part of the information has previously been given the correct response. Then, a new set of examples are presented to the computer, enabling the supervised learning algorithm to examine the training data and produce the correct response using the labelled data. Unsupervised learning is the process of teaching an algorithm to operate on data without being supervised using data that has not been classified or labelled. The machine's goal in this scenario is to categorise unsorted material based on similarities, patterns, and differences without any prior data training. The machine won't be trained because there is no teacher there, unlike supervised learning.

3. EXISTING SYSTEM

The security of data, which is frequently breached or taken by criminals, is currently a persistent challenge.

Machine Learning Preprocessing With CLI

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Abstract : Simulated intelligence is a subclass of man-made thinking (AI) that bright lights on showing PCs the best way to learn without being redone to do unequivocal endeavors. The critical thought behind ML is that it is feasible to make calculation that gain from and make forecasts on the information, Data preprocessing is a fundamental stage in Computer based intelligence as the idea of data and the accommodating material that can be gotten from it directly impacts the capacity of our model to learn ; thusly , it is exceptionally essential that we preprocess our data preceding dealing with it into our model.

Index Terms - Machine Learning , Data Preprocessing , CLI.

1. INTRODUCTION :

Mechanized thinking has a district called (AI). The goal of AI is to see the value in the plan of data and change that data into models that people can recognize and use. In spite of the fact that AI is a farmland inside programming, it change from excellent computational access.

Man-made intelligence estimations rather grant for PCs to plan on data information sources and use consistent assessment to yield convictions that fall inside a specific reach. At the end of the day, the presence of the information can now be smoothly made sense of by the calculation.

2. DEFINITION OF MACHINE LEARNING :

Simulated intelligence is a piece of electronic thinking that bright lights on the creation of computations that license a machine to acquire from data and past experiences.

Arthur Samuel organized the idiom "Simulated intelligence" in 1959, and it has been used since. Permits a PC to gain from information, upgrade execution in light of previous encounters, and foresee occasions without being unequivocally customized. The interaction begins with reinforce great quality information and afterward preparing machine or PC by development AI models utilizing the information and differentiating calculations.

The calculations decision relies upon what sort of information we have and what sort of assignment we are attempting to mechanize.

A machine has the ability to learn in the event that it can improve its presentation by accomplishing more information.

3. HOW DOSE MACHINE LEARNING WORK ?

- Information : Data is natural data like realities, values, text, sound, video, and photographs that has not been assessed or investigated ..
- Data : After the information pre-handling , we get vaid or significant data for the clients.
- Information : Knowledge is gaining from results..

CV ANALYZER BASED ON ARTIFICIAL INTELLIGENCE SYSTEM

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Abstract: - Selecting desirable applicants for an organization is one of the major challenges in human resource management. Resume evaluation for recruitment process is very important activity in IT industries for hiring and seeking new employees with required skills. Fortunately, the development in modern information system, digital technologies, the universal access of electronic technology and internet led to the inclination of the global Human Resource Management development and make the system more applicable. In this project, we present a set of techniques that makes the whole recruitment process more effective and efficient. We have implemented a system that can be used to evaluate and classify the resumes. System ranks the resumes based on various aspects likes qualifications, skills etc. Finally, it presents the results of the candidates as classified and selected resumes to the recruiter automatically without manual parsing. The results demonstrated that the designed system identifies the current demand on talent-seeking and quickly presented candidate rankings for a specific position, thereby fulfilling the needs of talent-seeking recruiters.

Keywords: Human Resource Management, evaluate, electronic .

Introduction : This paper reviews Artificial Intelligence (AI) approaches for automating the HR activities in recruitment process. It focuses on parsing the candidates resumes and shortlisting them as selected or rejected. The main concern is that to analyze the resume through various types of aspects and finally shortlisting them on the basis of their analysis. We have designed a system which classifies the resumes of applying candidates by considering the skill sets, interests and work experience mentioned in the resume of the candidates . This system represents better visualization of the selection results by using data visualization techniques. Data visualization speeds up the decision-making process in while conforming the screening of those shortlisted resumes in effective way. Hence, we can find, this system will lead the resume evaluation system towards fully automated procedure.

Literature survey:-

1. **International Research Journal of Engineering and Technology (IRJET) e-ISSN: 23950056 Volume: 07 Issue: 07 | July 2020, IRJET | Resume Evaluation System based on AI Rutuja Patil , Pratiksha Sarvade, Ajinkya Patil , Yash Bhosale :** This paper talks about smart and automated Resume Evaluation system, that reduces the HR activities along with the technologies used in it. This system consists of four components which uses Natural Languages Processing , Spacy and Classification techniques[to perform the various activities like parsing the CV, analyzing the results, generating list of

Automatic Pronunciation mistake detector

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Abstract:

This paper describes a new method of automatic error detection in the Computer Assisted Language Learning (CAPT) system. The method combines linguistic knowledge and modern speech technology. Our HMM classifier trained from annotations of linguists is not only capable of classifying correct and wrong phonemes, but also can tell how wrong an error phoneme is pronounced. Phone errors in L2's speech, like phoneme substitution or distortion are detected with high accuracy, and at the same time, corrective feedback with multimedia support, which demonstrates how exactly error phonemes should be pronounced, is also generated.

Keywords : multimedia , annotations .

Introduction:

In recent years, second language (L2) learning has become more and more popularto meet the need of communicating and integrating with a foreign community or society. However, learning a second language takes time and dedication, not only from learners, but also from teachers hence both face-to-face and 7/24 personal online language learning are very expensive. A large and still growing number of computer assisted language learning (CALL)

in the market has shown a clear trend: language learning is going to be web-based, interactive, multimedia andpersonalized, so that learners are flexible as to times and places for learning Modern technologies allow computer to beat human teacher in many aspects of language teaching like building up vocabulary and checking grammar, but not in training pronunciation, although many attempts have been made. Some industrial CALL applications are applying automatic speech recognition (ASR) on learners' speech and trying to infer the existence of errors from the confidence value in recognition results. This yields results with low accuracy because no specific model is trained todeal with all possible errors, hence is far less effectivethan traditional classroom teaching.

Application of Artificial Intelligence to the Development of a Fruit Quality Classification System

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ABSTRACT: Fruit quality classification in the consumer market has become a considerable burden following the decrease in the young adult population engaged in agriculture in Taiwan owing to its labor-intensiveness. We suggest a method that uses a camera as an image sensor and an artificial intelligence algorithm as a classifier to determine the exterior quality of fruit. Real operating situations are ideal for this application. Fruits are primarily detected by the "you only look once" (YOLO)-V3 algorithm, which continually tracks the chosen fruit using image attributes like size, height, and width, among others. Fruit quality is also determined throughout the tracking process. Finally, the application's switching gap distinguishes between fruits of various qualities. Our recently created method is used in the proposed application to identify round fruit like apples, oranges, and lemons. In order to increase the effectiveness of the suggested application, we also offer a graphical user interface to control and collect data, evaluate models, and monitor system operation.The experimental results show that the proposed application achieves an accuracy rate of up to 88% after testing on 6000 fruit images.

INTRODUCTION:

In recent years, the miniaturization of chips and the technological advancement of image sensors have proceeded. Artificial intelligence algorithms have also been rapidly developed and applied in various fields. Among them, machine learning and deep learning have been extensively used in image processing as their pattern recognition capabilities are compatible with human vision. In machine learning and deep learning, features can be captured from data through training. In order to construct autonomously regulated gateways for fruit quality classification using supervised learning, we can utilise feature operations in fruit detection and recognition. We have been researching the use of deep learning in machine learning for fruit quality classification, which is a crucial yet time-consuming procedure in agriculture because it frequently requires human eye and manual screening. To assist farmers, we have created a classification tool that sorts fruits automatically based on their quality. We also want to implement the system using less expensive hardware.

LITERATURE REVIEW:

Krizhevsky et al. proposed the training of a large, deep convolutional neural network (CNN) with high-resolution images from the ImageNet image database.(1) In 2017, Howard et al. introduced a convolution algorithm known as depthwise (DW) convolution that uses fewer parameters and computes more efficiently. (2) When there are three channels in the input, a single convolution kernel is used to compute each channel. The DW convolution is carried out on a 2D plane, which is the primary distinction from the convolution computation of Krizhevsky et al. Moreover, the filter's size must match that of the previous layer's input channel. Last but not

SIGNIFICANCE OF AI IN HR

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ABSTRACT
The current study will shed some light on developments in artificial intelligence and their potential effects on human resources. This study uses both primary and secondary data, including structural questionnaires distributed to participants and a likert scale with a consistency of 5 to 1 and 5 indicating strongly disagree. Data for the primary research methodologies came from surveys, interviews, and observation techniques, which were either quantitatively or qualitatively collected with additional inclusion or exclusion criteria. Artificial intelligence (AI) technology is quickly replacing the status quo in businesses across all industries. Because of this quick acceptance, certain operations, including human resources management (HRM), are able to optimise processes, increase efficiency, save operating costs, and boost productivity. Artificial intelligence (AI) is being incorporated into HRM processes, which is changing how businesses interact with their workers and how they are able to analyse data, foresee scenarios, and take necessary action.

KEYWORDS: Artificial Intelligence, Human Resources, Functions, Implications.

INTRODUCTION

A crucial function in a corporation is played by human resource management, which often deals with employee behaviour inside the same organisation. AI has a significant impact on HR services, including hiring and firing, training and development, performance measurement, and task automation, among others. An HR representative's job required them to be physically present at the employee bay and accessible to them. Consider the present, when most of these personnel demands have been replaced by automation and digitization. At the same time, HR's position has evolved into that of a strategic business and consulting partner.

AI-built chatbots can be enabled to give employees and HR professionals more authority to continue the engagement dialogue on a regular basis.

AI paves the way for improved efficiencies across various HR processes in multiple ways, some of which are mentioned below.

Talent acquisition

The process of hiring new employees is the best application of AI in HR. AI has the potential to streamline tedious tasks, improve hiring procedures, and save time and effort. The HR team may concentrate on recruiting marketing, personnel management, sourcing, and other profitable areas thanks to it. Most crucially, AI brings intelligence to assess a candidate's job fit and skill mapping, forecast trends in the offer-to-join ratio, and maintain databases

Reinforcement Learning an important aspect of Artificial Intelligence

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Abstract: The overall discussion on Reinforcement Learning (RL) provided a comprehensive overview of this important area of Artificial Intelligence (AI). The concept of RL was defined as a learning paradigm in which an agent learns to make decisions by taking actions in an environment and receiving feedback in the form of rewards. The process of RL was explained, including the exploration-exploitation trade-off, the importance of function approximation, and the challenges of sparse rewards. The limitations of RL were also discussed, including its sample efficiency, stability, exploration-exploitation trade-off, function approximation, and sparse rewards. Finally, the future scope for RL was discussed, including its potential applications in robotics, healthcare, gaming, transportation, and finance. The overall discussion provided a clear and concise introduction to the topic of RL and its importance in the field of AI.

Index Terms: RL, Reinforcement Learning, AI, Artificial Intelligence

Introduction: Reinforcement learning (RL) is a subfield of artificial intelligence that focuses on training agents to make decisions in an environment by learning from their own experiences. In RL, an agent interacts with an environment and receives feedback in the form of rewards and penalties. The goal of the agent is to learn a policy, which is a mapping from states to actions, that maximizes the cumulative reward over time.

RL algorithms work by updating the agent's policy based on the observed reward signal, allowing the agent to learn from its experiences and improve its behavior over time. This trial-and-error learning process is similar to the way humans learn from their experiences and make decisions based on their past experiences.

RL has a wide range of applications, including robotics, control systems, and game playing, and is an active area of research in both academia and industry. RL has the potential to revolutionize the way we interact with and control machines, as well as provide new solutions to complex problems.

Literature: Reinforcement Learning (RL) is a rapidly growing area of research in Artificial Intelligence (AI), and there is a large and growing body of literature in this field. The literature on RL spans a wide range of topics, including algorithms for learning in Markov Decision Processes (MDPs), function approximation, deep reinforcement learning, multi-agent reinforcement learning, and more.

The Role of AI in Cybersecurity

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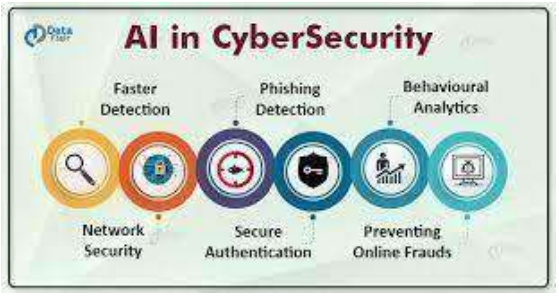
Abstract: The concept of AI in cybersecurity, which refers to the use of artificial intelligence techniques and algorithms to enhance the capabilities of cybersecurity systems. The benefits of AI in cybersecurity include the ability to analyze network traffic, detect anomalies, classify and respond to phishing emails, improve the effectiveness of intrusion detection and prevention systems, and automate the process of threat intelligence gathering and analysis. However, there are limitations to the use of AI in cybersecurity such as limited understanding of advanced threats, false positives and false negatives, lack of transparency, dependence on data quality, and ethical concerns. The future scope of AI in cybersecurity is promising as it has the potential to significantly improve the ability of organizations to detect, respond to, and recover from cyber-attacks. Additionally, AI-based systems will be integrated into different cybersecurity tools and platforms and will be used to secure IoT devices.

Index Terms: Cybersecurity, cyber-attacks, Artificial Intelligence

Introduction: AI in cybersecurity refers to the application of artificial intelligence (AI) techniques and algorithms to enhance the capabilities of cybersecurity systems. This can include using machine learning, natural language processing, computer vision, and other AI-based technologies to analyze network traffic, detect anomalies, classify and respond to phishing emails, improve the effectiveness of intrusion detection and prevention systems, and automate the process of threat intelligence gathering and analysis.



The use of AI in cybersecurity can be traced back to the early 2000s, when researchers first began exploring the use of machine learning techniques for intrusion detection. Since then, the field has grown to encompass a wide range of AI-based techniques and applications. The main driver for the growth of AI in cybersecurity is the increasing volume and complexity of cyber-attacks. With more and more devices and systems connected to the internet, the attack surface for cyber criminals has grown exponentially. At the same time, cyber-attacks are becoming more sophisticated, making it increasingly difficult for traditional cybersecurity methods to detect and respond to them.

One of the key benefits of AI in cybersecurity is its ability to quickly and accurately analyze large amounts of data.

Review on the Models of Access Control For Cloud Computing

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ABSTRACT

A popular paradigm known as "cloud computing" offersits consumers a variety of resources and affordable software services on demand, including Platform as a Service, Infrastructure as a Service, and Software as a Service. Even if these services offer a lot of advantages to their customers, data security is still necessary to prevent unwanted access to data. So, utilising access control mechanisms for allowed access can improve security. Therefore, a key component of cloud computingis access control. The numerous access control techniques employed in the cloud computing environment are the main topic of this research. This document provides information on how access control models improve data security.

General Terms

Cloud Computing, Access Control Models.

Keywords

Cloud Computing, Access Control, Discretionary Access Control, Mandatory Access Control, Other Access Control Models,

1. INTRODUCTION

Cloud computing is a significant paradigm in industry and academics today because it gives on-demand access and provides ubiquitous computing. The following is NIST's [1] definition of cloud computing: A model called "cloud computing" makes it possible to quicklybuild and deploy a shared pool of reconfigurable computing resources (such as networks, servers, storage, applications, and services) over a network on demand and with little management work or service provider involvement.

The bright future of cloud computing has not only offered opportunities but also difficulties in terms of data security. The method of access control guards against unauthorised access to data by giving access rights to cloud-based data. Using access control is essential for system security.

According to the cloud security alliance [2], the following five elements are fundamental: on-demand self service, resource pooling, broad network access, quick elasticity, and measurable service. As indicated in fig. 1, the cloud computing environment offers the following service and deployment models:

In PaaS (Platform as a Service), a cloud provider offers the platforms that can be used by cloud users, while SaaS (Software as a Service): IaaS (Infrastructure as a Service) offers storage and network capacity to their customers on demand in this provider's provision of the environment in which users construct and deploy their applications

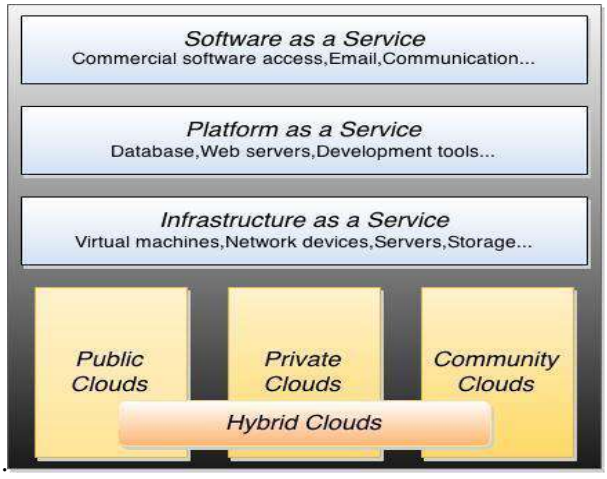

Fig 1. Cloud Computing Model [

Extractive Text Summarization using SpaCy in NLP

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Abstract:- On the Internet today, there are millions of web pages and websites. Going through a large amount of stuff to get information on a specific topic becomes extremely tough. Google will filter the search results and show you the top ten results, but you will often be unable to find the relevant material. The articles contain a lot of redundant and overlapping info, which wastes a lot of time. The better way to deal with this issue is to reduce the amount of text material available to smaller sizes. Text summarization is a natural language processing (NLP) approach that extracts text from enormous amounts of data. It aids in the creation of a condensed version of the huge text provided. The text contained within them can become overly long and difficult to grasp at times. Despite the vast information available on the internet, the user may find it difficult to navigate big sections of material. We were relieved when natural language entered the market and we finally had something that could grasp the language we spoke or wrote in. Another source of relief was the presence of algorithms for actual human languages. There are two types of data summarising techniques: extractive and abstractive. This paper is more focused on the Extractive way.

INTRODUCTION

Because of the enormous development in the availability of blogs, news stories, and reports in the present era of big data, obtaining meaningful information from a vast number of textual documents is a difficult challenge. The steady evolution of technology has demonstrated the importance of data produced today, which plays a crucial role in both technical and non-technical fields. The tremendous volume of data produced in the digital world on a daily basis necessitates the development of a system that can automatically reduce sentences. Additionally, using text summaries speeds up the research process, reduces reading time, and increases the amount of critical information provided in the specific area. The main goal is to write a detailed andwell-organized summary that summarises the main ideas of the text. Automatic text summarization is a useful tool for summarising textual papers. The objective of text summarising is to reduce large materials into brief summaries while retaining significant information and

Limitations Of Artificial Intelligence

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Abstract:- Artificial intelligence is a game-changing technology that has now become a well-established field. It is used to simulate human capabilities including as speaking, listening, learning, and planning by processing data and producing outputs based on the information provided by the user. When it comes to data processing and decision making, artificial intelligence has been applied in a variety of industries. Artificial intelligence was created to aid decision-making and solution-making processes using a problem-solving methodology. The development of Artificial Intelligence software provides efficiency and acceleration on various types of workflows, allowing firms to enhance profits while reducing waste and expenditures due to poor productivity. Indeed, Artificial Intelligence is fast advancing, and many firms are eager to try and test what is on the market. Others, on the other hand, are sceptical of AI because of purported ethical difficulties that could lead to accountability in a certain way. This thesis will show how Artificial Intelligence is employed in several disciplines such as law, medicine, the military, and others, as well as explore the limitations that exist.

INTRODUCTION

Artificial intelligence is a pioneering technology that has now become a well-established field. It is used to simulate human skills including as speaking, listening, learning, and planning by employing various algorithms to analyse data and provide outcomes based on the information supplied by the user. When it comes to data processing and decision making, Artificial Intelligence has been applied in a variety of sectors. Artificial intelligence was created to aid decision-making and problem-solving processes. The development of Artificial Intelligence software delivers efficiency and acceleration on many types of processes, allowing firms to boost profits while reducing wastage and expenditures due to poor productivity. There are currently many applications that AI can power, like Web Search, Cybersecurity, and Machine Translation. Artificial intelligence is now available to everyone, and it is helpful to humanity. Artificial intelligence has many good characteristics since it creates significant outcomes in people's everyday lives and enterprises today; robots and virtual assistants are two of the most prevalent Artificial Intelligence technologies employed by the industry. Natural Language Processing (NLP) and Speech Recognition Platform (SRP) fuel Artificial Intelligence, but it is not restricted to these two (2); many elements must be considered, although these branches aid in the understanding and manipulation of the commands specified. AI was not intended to replace humans, but

RESEARCH PAPER: DATA LOSS PREVENTION SYSTEM

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Abstract: Technology is advancing at an exponential rate, and more quick processing devices are being introduced. Even powerful software could be run on a mobile device, and even a little SD card might hold all of an organisation's data. In this rapidly expanding IT world, ensuring data security is crucial because even a tiny data loss could have a significant impact on the organisation. As a result, protecting sensitive data has become the biggest problem. The traditional tactics used by organisations included creating policies within the company, installing firewalls, and deploying virtual private networks at the endpoints. However, as technology advanced, so did the ways for data leakage and theft. Consequently, a system that could stop leaks was required.

INTRODUCTION:

The majority of businesses have shifted to cloud computing since it offers additional benefits like remote working, simple file sharing, and making daily tasks easier; yet, the largest concern for the organisation is data leakage. Although cloud computing has many benefits, it also carries more hazards for those businesses. Loss of sensitive and private information, whether on purpose or accidentally, is the biggest hazard facing businesses that have migrated to cloud computing. Due to a lack of best practices, the majority of organisations experience more severe data breaches. Even when data were manually kept as papers in files, breaches still happened with the quick transition to digital models. in cases where the data are not digital Data breaches also refer to the availability of an unauthorised person looking at the files without the appropriate authorization or looking into private information that is not properly destroyed. Organizations and the general public's knowledge of the potential harm caused by data breaches also grew quickly as their frequency increased through the 1980s, 1990s, and early 2000s. Malware, Phishing, Denial-of-Service (DoS), and Ransomware are the four main types of Data Breaches. Even if data breaches started happening before 2005, several of the larger ones were first revealed in that year or later. As more and more data are being stored on the cloud, cybercriminals have a greater chance of exposing a large amount of data because the amount of data in the globe is continually growing. in a single attempt to breach data. According to the Privacy Rights Clearinghouse, 136 data breaches happened just in 2005, 4500 data breaches have been made public since that year, and 816 million personal details have also been compromised. Since 2005, the data breaches occurring in the United States have been continuously reported by statistical reports, which state that data breaches have been on the rise annually since 2005. This effort has been made by numerous expert committee members, analytical agencies, and the media. In 2005, 157 breaches were reported, exposing 66.9 million records, whereas in 2014, there were 783 breaches, exposing 85.61 million records which, as compared to 2005, was 500% more. The number of breaches reported rose to 1,579 in 2017. These reports are all solely from the United States, when taking into account which were unreported, this may go up since they are formally reported. Statista's reports will be more cautious when compared to Verizon DBIR or other top industry standard breach reports. Every year, there are more breaches recorded in the United States; in 2013, 2014, 2016, and 2017, there were 614, 783, 1093, and 1579 breaches, respectively. According to reports from 2018, the price per last record in a breach was discovered to be 148 USD. 3.86 million US dollars on average were found to be the cost of each breach.

LITERATURE:

For this study, the search was limited to articles about the methods and technologies used for DLP that were published in impact

RESEARCH PAPER: Detecting Mobile Phone Hacking

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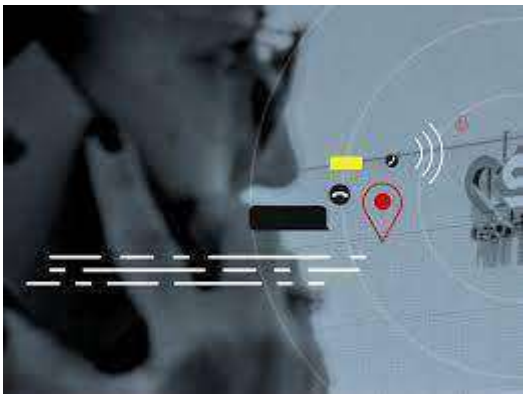
Abstract: As more people race to discover the digital world, smart phone use has grown incredibly popular across the globe. In recent days, its user base has increased at an exponential rate. People are use smart phones to access a variety of applications, including financial, business, educational, and social ones. This article discusses the flaws discovered in Android-based smart phones as well as the concerns related to these specific devices, including privilege escalation, privacy attacks, and other threats. The potential defenses against the assaults and dangers that make Android smart phones vulnerable are covered in the final section.

INTRODUCTION:



Mx Spy Way Root App

The Mx Spy app continues to be the best at hacking phones. The app is extremely well-liked and was widely utilized in the US. It would provide you with over 30 unique features that would help you accomplish your objective. This makes it simple to hack into someone's smartphone. You can start hacking someone's phone once you've installed this programme on the targeted device.

Using two factors to authenticate

WhatsApp Security Settings support two-factor authentication. using two-factor authentication and end-to-end encryption.

Cyclonis Pass

Use the Cyclonis Password Generator, for instance. A free password management programme called Cyclonis has a variety of functions that can simplify your life. It can produce a secure password.

Facebook Hacking First, you might want to uninstall WhatsApp and then reinstall it numerous times if you believe that your account has been hijacked. Reinstalling the programme at various periods of the day, according to some security experts, would also prevent the WhatsApp breach from causing you further problems. It is cumbersome to uninstall and reinstall the application.

LITERATURE:

RESEARCH PAPER: DIGITAL PRIVACY

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Abstract: The study of older individuals' digital privacy concerns and behavior is still in its early stages. This empirical study explores the factors that lead to older individuals' privacy worries, their online privacy protection activity, and the moderating influence of potential advantages from digital contacts. Possible advantages greatly reduce the impact of privacy worries on older persons' privacy-protection actions. This study makes a contribution to the field of online privacy research as well as the study of older individuals' digital activities by examining the digital behavior of older persons, this study adds to the body of knowledge about online privacy.

INTRODUCTION:

As a method of communication and business, consumers from all social classes are increasingly engaging in online interactions. Identity theft, email phishing, spam, spyware, and other Internet fraud techniques are on the rise along with the proliferation of online interactions, and these practices can have detrimental societal and economic repercussions. Customers' thoughts and attitudes towards using the internet for communication and business could be influenced by their worries about losing their information privacy and a company's capacity to secure that information. According to the 2016 Internet Crime Report1, in According to the 2016 Internet Crime Report1, the Federal Bureau of Investigation (FBI) in the United States received 298,728 reports of online fraud in 2016, with damages totaling more than USD 1.3 billion. In the United States, older persons (aged 50 or over) made up around 39.1% of the victims of online fraud and reported about 56.6% of losses.

While there are several research on consumers' privacy concerns while they engage in online activities, there are currently few studies that concentrate on how such concerns are translated into behaviors that customers take to preserve their online privacy.

This is how the paper is structured: The current literature review on older adult consumers, their usage of the internet, and the Theory of Reasoned Action is presented in the following section (TRA). We then go over the research hypothesis and the TRA-based research paradigm. The research methodology and data collection techniques are then described. The outcomes of the study of empirical data conducted using structural equation modelling approaches are then presented. The findings are discussed in relation to the study questions in the section that follows. The limitations and the directions for future research follow the contributions and management implications of this research endeavor.

USAGE OF AI AND ROBOTICS IN PROJECT MANAGEMENT

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ABSTRACT: Project management could gain significantly from the incorporation of artificial intelligence (AI) and robotics, including increased effectiveness, accuracy, and predictability. AI algorithms can analyze project data and provide insights and predictions, while robotics can automate repetitive or manual tasks. However, there are also potential challenges and limitations, such as the need for specialized knowledge and skills, ethical considerations, and the potential for job displacement. The use of AI and robotics in project management is still in its early stages, but it is likely to become more widespread and impactful as technology continues to advance.

INTRODUCTION:

Artificial Intelligence (AI) and Robotics are transforming the way projects are managed. They are being used to automate tasks, improve decision-making, and increase the efficiency and accuracy of project processes. In project management, AI and robotics have the potential to bring significant benefits, including reduced costs, improved predictability, and enhanced collaboration and communication. AI algorithms can be used to analyze large amounts of project data, identify trends, and provide insights and predictions about project performance. This information can help project managers make more informed decisions and identify potential risks before they become problems. Robotics can automate repetitive or manual tasks, freeing up project managers and team members to focus on more strategic tasks. In addition, AI and robotics can improve collaboration and communication by automating the sharing of project updates and providing real-time data and insights. This can lead to more efficient and effective decision-making and increased project success rates. In general, the application of AI and robotics in project management is still in its infancy, and there is a great deal of room for future growth and innovation. As technology continues to advance, the applications and benefits of AI and robotics in project management are likely to become even more widespread and impactful.

LITERATURE:

Improved Project Planning: AI and robotics can be used to automate the project planning process, reducing the time and effort required for project managers to create accurate project schedules.

Better Risk Management: AI-powered tools can analyze data from multiple sources, such as project performance history, to provide early warnings of potential risks, allowing project managers to proactively mitigate them.

Increased Productivity: By automating repetitive tasks and freeing up human resources, AI and robotics can help project managers improve productivity and efficiency, reducing project completion time and costs.

Improved Decision-Making: AI can support project managers in making better

Data Mining With Big Data

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ABSTRACT: A wide range of scientific and other academic disciplines now depends on the ability to process big datasets effectively in the age of information technology. Since there is an abundance of data today, the phrase “Big Data” is being used frequently. It includes everything from meteorology to genetics to sophisticated computer simulations of physics to studies into biology and the environment to business and finance to medical treatment. Big data refers to data streams that are moving more quickly and have a wider diversity. Both during data capture and the execution of rapid, simple queries, the infrastructure required to support the acquisition of Big Data must have low, predictable latency. The ability to manage extremely high transaction volumes, frequently in a dispersed setting, and provide flexible, dynamic data structures are required. Data processing is much more difficult than just finding, recognising, analyzing,and citing data. All of this must be fully automated for the large-scale analysis to be effective. To accomplish this, changes in data structure and semantics must be stated in a fashion that computers can understand and then be "robotically" resolved. There has been a significant amount of research done on data integration, mapping, and transformations. Yet a lot more effort needs to be done in order to achieve automatic error-free difference resolution. This article provides a framework based on recent research for data mining with large data.

INTRODUCTION:

In the era of information technology, being able to analyse massive datasets effectively has become essential for a variety of scientific and other academic areas. The term "Big Data" is becoming more prevalent because of the data flood that is now taking place. This covers a wide range of subjects, such as meteorology, genetics, complex physics simulations, biological and environmental studies, fashion, business, and healthcare. In the next ten years, it is expected that the amount of data generated by machines, devices, cloud-based services, business management, etc. would increase 20-fold in modern industry. This volume of data currently exceeds 1000 Exabytes annually. However, consumers cannot obtain crucial information since this data is often poorly organised and frequently incomplete. We need technology and tools to find, process, analyse, and visualise data so that it can be used to make good decisions.

Big Data is a term used to describe information that can be found in billions, even trillions, of records that have been created by millions of peopleand kept in a variety of places across the internet. In addition to overcoming additional difficulties brought on by utilising small data samples, large data enables researchers to relax the theoretical model assumptions, avoid overfitting models to train data, handle noisy train data better, and give sufficient test data to validate models. This essay is structured as follows: Big Data potential and difficulties are briefly discussed in Section II. Section III offers a thorough literature review of the most recent Big Data studies. The resolution can be found inSection IV.

RESEARCH PAPER: AIRTIFICIAL INTELLIGENCE IN BUSINESS MANAGEMENT

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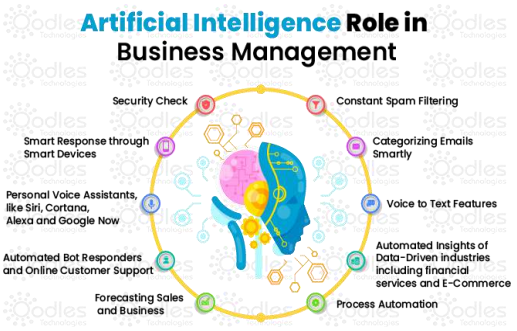
Abstract: One of the rapidly growing sectors that is receiving greater attention in the corporate world is artificial intelligence (AI). Artificial intelligence has already been used in many spheres, including business and daily life. The application of AI in business may force the sector to rely on quicker, less expensive, and more accurate marketing techniques. A business owner can boost audience response and create a significant competitive advantage over other online businesses by incorporating this AI into marketing initiatives. In addition to marketing, it has the ability to restructure a company with innovative ideas. It also offers answers for complex issues, contributing to the great company growth. Thus, we will discuss how entrepreneurs use AI topology to create their businesses and what role it plays in various aspects of the enterprise in this research.

INTRODUCTION:

The logical outcome of the computerization of different activities, including those in the management sphere, is the greater usage of digital innovations in business. According to Haenlein et al. (2019), using AI in conjunction with other pertinent techniques is a way to maximize the results of control over all operational processes. In other words, this technology aids in decision-making by assessing the chances and hazards associated with various options based on pre-programmed algorithms. Business executives and owners are becoming more aware of AI as a practical technology that works with massive amounts of data, analyses incoming information, and creates adaptive solutions based on it. Because AI algorithms have so many programming options, they are used in business management just as frequently as they are in other fields where processing huge amounts of data is necessary. The use of contemporary innovations in this area can aid in determining the scope of AI capabilities about control over different operational processes within businesses. Benefit analysis is a method that makes it possible to pinpoint the ways in which this technology simplifies management compared to other digital tools utilized in the corporate environment. Lastly, taking into consideration the potential for the growth and adoption of AI in the business environment may assist anticipate significant justifications for incorporating this technology and effective solutions to speed up the implementation process. The technology under examination has the potential to be an indispensable tool as one of the crucial decision-making factors and to improve managerial positions in businesses with various profiles.



RESEARCH PAPER: BIG DATA USAGE IN HEALTHCARE INDUSTRY

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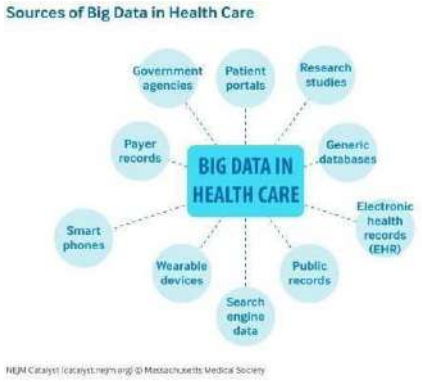
Abstract: The use of Big Data Analytics in the healthcare industry will enable the usage of technologies in patient care and health administration. The purpose of this study is to examine the potential applications of big data analytics in healthcare. The study's foundations include a critical examination of the available studies and the presentation of a few key findings from in-depth primary research in healthcare industry. Hospital records, patient medical records and test findings are some of the big data sources used in the healthcare sector. Healthcare providers must be fully equipped with the necessary infrastructure to regularly generate and analyze big data in order to offer pertinent solutions for enhancing public health. Modern healthcare organizations may transform medical therapy and personalized medicine with a strong integration of healthcare data.

INTRODUCTION:

Information has been essential to new developments and improved organization. We can organize ourselves more effectively to produce the best results. Data collecting is crucial for every organization. Big data refers to vast quantities of data that are impossible to manage with conventional software or web-based platforms. Big data is currently connected with fundamental technologies and numerous businesses, such as Google, Facebook, and IBM. Big data is being produced quickly across many industries, including healthcare, due to patient care, regulatory compliance, and other needs. The promise of new understanding from big data named for its volume, complexity, and variety healthcare shareholders. Experts and investors in the health industry have started to regularly examine big data to gain insights, However to solve problems with care delivery and raise the standard of treatment, this work must be integrated since it is still in its early stages. Early big-data analytics systems in healthcare informatics have been created for a number of functions, including the analysis of patient characteristics and the identification of the most beneficial and economical treatments.



Among the many different types of data utilised in healthcare applications are Electronic Health Records (EHR), machine-generated and sensor data, health information exchanges, patient registries, portals, genetic databases, and public records. In the healthcare sector, public records are a significant source of big data, and their linked healthcare issues demand effective data analytics. Big data can enable advanced patient care while lowering costs and enhancing healthcare delivery. Big data analytics is being used to predict the outcomes of decisions made by doctors, the outcome of a heart procedure for a problem, using patient age, current condition, and health status.

Posture Detection Using Posenet

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Abstract In human-computer interaction, the use of skeletal data to detect human posture is a popular topic of research. The angle and distance between joints are important factors to consider when determining posture. To improve the classification performance of sub-classifiers for diverse samples, the rule learning method is combined with the Bagging and random subspace methods. This creates different samples and features that can be used to more accurately classify human posture. Finally, four human posture datasets were used to evaluate the performance of our proposed method. The experimental findings show that our algorithm can effectively recognize a wide range of human postures with outputs that are interpretable. Deep learning is a branch of Machine Learning and Artificial Intelligence that uses a three- or more-layer neural network to mimic how humans acquire knowledge. Deep learning plays a big role in the development of artificial intelligence applications that help improve automation, the performance of analytical and physical activities without human involvement, and so develops disruptive applications among methodologies. Human Pose Detection is one such application where deep learning takes the place of traditional methods. Human pose estimation has been a difficult problem in computer vision for many years. It is important for many industries, such as robotics, video surveillance, biometrics, augmented reality, assisted living, and at-home health monitoring.

Introduction

Deep learning is a subset of Machine Learning and Artificial Intelligence that imitates the way humans gain certain types of knowledge. It is essentially a neural network with three or more layers. deep-learning helps to solve many artificial intelligence applications that help improving automation, performing analytical and physical tasks without human intervention, thus creates disruptive applications and techniques. One such application is Human Pose detection where deep learning takes its place. Posenet is a real-time pose detection technique that can detect human poses in images or video. It works for both single-mode pose detection (for example, detecting a single person's pose) and multi-pose detection (for example, detecting multiple people's poses). In other words, Posenet is a deep learning TensorFlow model that estimates human pose by detecting body parts such as elbows, hips, wrists, knees, ankles, and then joins these points to form a skeleton structure of your pose. PoseNet is a computer vision model that is used to estimate the position of a person in an image or video by using a single line of code. It was developed by Google, and is based on the MobileNet convolutional neural network architecture. MobileNet is trained on the ImageNet dataset, and is mostly used for image classification and

Implementation of a Fruit Quality Classification Application Using an Artificial Intelligence Algorithm

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Abstract Owing to the decrease in the young adult population engaged in agriculture, fruit quality classification in the consumer market has become a considerable burden in Taiwan. We propose a system to identify the external quality of fruit, which utilizes a camera as an image sensor and an artificial intelligence algorithm as a classifier. This application is suitable for real operating environments. Fruits are mainly detected by the "you only look once" (YOLO)-V3 algorithm, with the designated fruit continuously tracked using the characteristics of the image, such as size, height, width, etc., and the quality of fruit is detected during the tracking process. Finally, the switching gap of the application distinguishes fruits of different quality. Our newly developed process can detect round fruit, such as apples, oranges, lemons, and limes. We also provide a graphical user interface (GUI) to control and collect data, evaluate models, and monitor the entire system operation. This can help improve the efficiency of the proposed application. Our experimental results show that the proposed application can achieve an accuracy rate of up to 88% after testing on 6000 fruit images.

Introduction

The technological development of image sensors and the shrinking of processors have both advanced recently. Algorithms for artificial intelligence have also been created quickly and used in a variety of fields. Deep learning and machine learning have been among them. Since their pattern recognition abilities are consistent with human vision, they are widely utilised in image processing. Features can be extracted from data in machine learning and deep learning through training. Fruit detection and recognition feature operations can be used to construct manually controlled gateways for supervised learning fruit quality classification. We have been researching machine learning applications of deep learning and their usage in the categorization of fruit quality, which is a crucial yet time-consuming procedure in agricultural because human vision and manual screening are usually necessary. To assist farmers, we have created a classification application that sorts fruits automatically based on their quality. We also want to implement the system with less expensive hardware.

BLOCKCHAIN BASED CAR-SHARING SYSTEM

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ABSTRACT

The market for automobile sharing is constantly expanding, and lately it surpassed private auto ownership in popularity. The traditional car-sharing system, on the other hand, is built on a centralized database server, which frequently results in hacker assaults or password leaks. Additionally, under a traditional car-sharing scheme, the proprietors of the vehicles may abuse client information. The ideal way to resolve these challenging problems, as demonstrated in today's many application cases, is to leverage blockchain technology.

Customers benefit from unbreakable security thanks to blockchain, a decentralized, immutable, public ledger, which is decentralized and immutable. The proposed solution aims to develop and put into use a peer-to-peer short-term car-sharing application based on blockchain and smart contracts.

INTRODUCTION

Car sharing is becoming increasingly popular.While many people would prefer not to share a car with a foreigner, car-sharing services such as car2go, in which businesses offer their owned vehicles, are a fantastic option in cities.Because gasoline-powered vehicles are the primary source of pollution, several countries are reducing the number of cars on the road. Car-sharing can potentially help with this issue by giving us with a car when we need it. According to statistics, the car is parked 96% of the time. Furthermore, we are not need to have a car, which greatly lowers our living and maintenance expenditures. Smart ideas combined with mobility necessitate unusual, sometimes even hostile developments [3]. That is why we desire.

Get about is one of the most popular peer-to-peer car-sharing platforms. Users can use this platform to rent a car for a short length of time, beginning with one hour. Users can earn money by sharing their vehicles while they are not in use.

Unfortunately, giving this type of service to consumers introduces a slew of security issues, the most serious of which being the overall stability of the service.Using D Dos attacks on a centralised server would cause the entire service to fail. In comparison, when data is dispersed and processed across a large network of nodes, such as blockchain, it is nearly impossible to tamper with the service.

All of the reasons raised above have become the driving force for the development of a decentralised peer-to-peer application built on top of the Ethereum blockchain with Solidity language for smart contracts and React JS for the client side of the application. We use Web3 as an Ethereum network connector..

Carpooling: facts and new trends

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ABSTRACT

The study tackles the current state of carpooling by reporting the most recent statistics divided into its many arms: private, corporate, and urban carpooling. Some new experiences have been reported for this last type: immediate carpooling, carpooling linked with car sharing and other kinds of transportation. The potential of carpooling in the future scenario of disruptive technology like self-driving cars and dynamic road charging is investigated. Finally, several recommendations linked to the user-centered approach and the roles of the various stakeholders are proposed..

Keywords—carpooling; users; integration; user-centered; autonomous cars; dynamic road charging.

INTRODUCTION

Because of shifting demographics, attitudes, and technology, we are rapidly transitioning from separate public and private transportation firms to a more integrated Multi Modal Mobility Network. The Future of Mobility comprises of technology-enabled, door-to-door, multi-modal travel that includes pre-trip, in-trip, and post-trip services to improve the Mobility User's journey experience [1].

Carpooling is one of the most visible and rapidly evolving areas of the paradigm shift from vehicle ownership to vehicle usage shared mobility, and thus one of heightened importance, as it addresses the population's need for mobility in contexts where traditional modes of transportation are less effective [2].

Carpooling, according to the most widely used taxonomy, is the agreement of multiple individuals often travelling along the same route at mutually compatible times to share the use of a private car [3]. Carpools are frequently used for commuting and can be organized between known or unknown persons. The first choice is the most basic sort of carpooling; in any other instance, the carpooling system becomes more complex, necessitating flexible solutions for travelers. These systems are frequently referred to as real-time or dynamic ride sharing since they match drivers and riders based on destination via a mobile app before the trip begins. The passenger is frequently asked to contribute to the expense of the trip.

Carpooling is an old "technology," and several government initiatives have pushed it for over a half-century. In the 1940s, a massive conservation campaign began to spread across the United States, led by the government, which attempted to educate and inspire each person with vivid, strong messages about the grave need for everyone to take action, including carpooling [4].

Carpooling was first adopted and supported in national legislation in Italy in 1998, with the passage of a law on sustainable mobility [5]. Carpooling has grown significantly in recent years, thanks to the proliferation of several web sites that allow individuals seeking and/or offering a ride to connect and better define-plan the trip details.

DIFFERENT FORMS OF CARPOOLING IN ITALY

The Italian situation

The operator that presently dominates the Italian and European market for Personal Carpooling is BlaBlaCar, which has over 50 million members in 22 countries. BlablaCar, which was founded in France in 2006, came in Italy in 2012. BlaBlaCar had 2.5 million customers in 2017 and had provided 1.5 billion kilometres since 2012. [6].

Image-Based Method to Calculate Object Distance

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Mr. Sadiq Shaikh, Lecturer PHCASC, Rasayani

ABSTRACT:

One of the key areas of study in the realm of computer vision and robot navigation applications is the computation of object distance using image processing. The distance of an item may now be calculated with a single photograph thanks to the innovative way we've suggested in this study. We have found a correlation between an object's pixel height and its actual distance from us. The system we train finds a mapping between an object's pixel height and physical distance by taking advantage of this connection. Once the physical distance of test items from the image's pixel height has been determined, this mapping is utilised to calculate it. Through physical distance estimation with an accuracy of up to 98.76%, experimental findings show the potential of our suggested method.

***Keywords**:* artificial intelligence, object tracking, depth detection, and picture processing.

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INTRODUCTION:

Researchers are considering a variety of applications, such as computer vision and automatic robot navigation, because of the introduction of artificial intelligence. Object detection, obstacle avoidance, and position finding are only a few of the difficulties in these domains. In recent years, the fields of computer vision5 and robot navigation have made extensive use of image processing techniques4. Although there are various hardware-based methods for finding obstacles, such as sonar and laser, image processing techniques currently give the highest level of accuracy. The challenge of determining how distant the item is from the camera is crucial in various ways when dealing with obstacle avoidance or object recognition. We provide an image-based method to measure item distances in this research.

Image processing may be divided into five categories:

Finding items that are hidden in the image via visualisation. Identifying or detecting items in the picture. Create an enhanced image from the original by sharpening and restoring. To find patterns, count the various patterns that surround the objects in the image. Search and browse through photos in a sizable library of digital photos that are comparable to the source photo.

The two categories of image-based distance calculation methods are stereo vision-based

Plant Disease Detection using Deep Learning

Sejal Sachin Mahadik, Student, PHCASC, Rasayani

Mr. Sadiq Shaikh, Lecturer, PHCASC, Rasayani

ABSTRACT:

More than just a means of feeding an expanding population, modern agriculture now serves many other purposes. A nation's economy is in some manner reliant on its agricultural sector. A greater emphasis on the primary sector is necessary because of the daily population growth. According to a World Bank research, three out of every four residents of developing nations live in rural areas and earn little more than Rs. 200 per day. The quality of the agro-product sectors, particularly in emerging nations, must be improved via agricultural refinement. Consequently, the key to preventing agricultural losses may just be the early diagnosis of plant infection. We created "Plant disease detection" because we firmly think that all information that enables people to produce high-quality food should be freely available to everybody. The next major step in illness diagnosis is the creation of algorithms that can correctly identify a disease from a picture, helping to realize the dream of a prosperous agricultural sector. The objective of this project is to develop an AI application that can identify and categorize plant illnesses. PyTorch will serve as our deep learning framework, and the public dataset Plant Village with its 54,444 photos will be used. Images of plant leaves will be used to look for plant ailments. Therefore, we think that identifying plant diseases early on will undoubtedly support agricultural stability and advance a nation's prosperity.

Keywords: Plant Disease Detection, Convolution Neural Network, OpenCV, Deep learning, PlantVillage, PyTorch, Disease diagnostics tool.

1. INTRODUCTION:

Agriculture was long believed to involve the engineering of fundamental food crops. Before farming was really commercialized, agriculture and farming were viewed as one and the same. With the explosion of industrialization, individuals suddenly realized the potential for significant financial gain as a result of economic growth, leading to the recognition of many other farming-related professions as a subset of agriculture. Forestry, fruit cultivation, dairy, poultry, and other activities are currently included in agriculture in addition to farming. Modern agriculture today includes the science, technology, and engineering involved in production, processing, and distribution. A more detailed definition of agriculture is *"the art of producing crops, including the production, processing, marketing, and distribution of crops and animal products."* With the help of modern technology, mankind have been able to feed a population of over 8 billion people. Even so, a number of variables including plant diseases, climatic changes, etc. continue to threaten food security. Given that everyone depends

RESEARCH PAPER: Long Short Term Memory

Mr. Siddesh G. kathavale, Student, PHCASC, Rasayani

Mr. Sadiq Shaikh, Lecturer, PHCASC, Rasayani

ABSTRACT

Learning to store information over extended time intervals via recurrent backpropagation takes a very long time, mostly due to insufficient, decaying error back flow. We briefly review Hochreiter's 1991 analysis of this problem, then address it by introducing a novel, efficient, gradient-based method called “Long Short-Term Memory" (LSTM). Truncating the gradient where this does not do harm, LSTM can learn to bridge minimal time lags in excess of 1000 discrete time steps by enforcing constant error flow through “constant error carrousels" within special units. Multiplicative gate units learn to open and close access to the constant error flow. LSTM is local in space and time; its computational complexity per time step and weight is O(1). Our experiments with artificial data involve local, distributed, real-valued, and noisy pattern representations. In comparisons with RTRL, BPTT, Recurrent Cascade-Correlation, Elman nets, and Neural Sequence Chunking, LSTM leads to many more successful runs, and learns much faster. LSTM also solves complex, artificial long time lag tasks that have never been solved by previous recurrent network Algorithms

INTRODUCTION

Recurrent networks can in principle use their feedback connections to store representations of recent input events in form of activations (“short-term memory", as opposed to “long-term memory" embodied by slowly changing weights). This is potentially significant for many applications, including speech processing, non-Markovian control, and music composition (e.g., Mozer 1992). The most widely used algorithms for learning what to put in short-term memory, however, take too much time or do not work well at all, especially when minimal time lags between inputs and corresponding teacher signals are long. Although theoretically fascinating, existing methods do not provide clear practical advantages over, say, backpropagation in feedforward nets with limited time windows. This paper will review an analysis of the problem and suggest a remedy.

The problem. With conventional “Back-Propagation Through Time" (BPTT, e.g., Williams and Zipser 1992, Werbos 1988) or “Real-Time Recurrent Learning" (RTRL, e.g., Robinson and Fallside 1987), error signals “flowing backwards in time" tend to either (1) blow up or (2) vanish: the temporal evolution of the backpropagated error exponentially depends on the size of the weights (Hochreiter 1991). Case (1) may lead to oscillating weights, while in case (2) learning to bridge long time lags takes a prohibitive amount of time, or does not work at all (see section 3).

The remedy. This paper presents “Long Short-Term Memory" (LSTM), a novel recurrent network architecture in conjunction with an appropriate gradient-based learning algorithm. LSTM is designed to overcome these error back-flow problems. It can learn to bridge time intervals in excess of 1000 steps even in case of noisy, incompressible input sequences, without loss of short time lag capabilities. This is achieved by efficient, gradient-based algorithm for an architecture enforcing constant (thus neither exploding nor vanishing) error ow through internal states of special units (provided the gradient computation is truncated at certain architecture-specific points this does not affect long-term error flow though

LITERATURE

This section will focus on recurrent nets with time-varying inputs (as opposed to nets with stationary inputs and xpoint-based gradient calculations, e.g., Almeida 1987, Pineda 1987).

Gradient-descent variants. The approaches of Elman (1988), Fahlman (1991), Williams (1989), Schmidhuber (1992a), Pearlmutter (1989), and many of the related algorithms in Pearl- mutter's comprehensive overview (1995) su er from the

Stock price prediction using LSTM

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ABSTRACT:

Stock market is well known to all. It is an option for investment and trading. But it is a really difficult thing to predict the future stock price. It is helpful for the investors and traders to know the future price, so that they can enter and exit the market at the right time and right price. Although there are different methods to predict future price, new algorithms and deep learning performed quite well in this. In this paper Long Short Term Memory (LSTM) is used to predict stock price and here we studied the implications of epochs and batch size in the model. Prediction of stock market has been an attractive topic to the stockbrokers. In stock market the decision on when buying or selling stock is important in order to achieve profit. There are number of techniques that can be used to help investors in order to make a decision for financial gain. In this research work I have propose a prediction algorithm that will give the relation between the dependent factor like price and independent factors like opening price, closing price, high value of stock, low value of stock and volume of stocks bought.

INTRODUCTION

A stock market is a public market for trading of company stocks. Stock market prediction is the task to find the future price of a company stock. The price of a share depends on the number of people who want to buy or sell it. If there are more buyers, then prices will rise. If the seller has a number of buyers, the price will drop. The agent can often help people to buy/sell shares on the stock market. A broker can also help customers make the right choices in stock. Stock price depends on multiple factors. It is basically based on demand and supply. It mainly depends on trends, news, policies, etc. Accurate prediction is very difficult. But it is extremely useful for investors and traders. It is helpful to earn profit. So people usually do the analysis manually. They take the help of charts, market indices, news, etc. But it is not an easy work. Nowadays it is becoming easy to use a huge dataset. These datasets can be from different sources. Machine learning techniques are used and this is proved to generate quite accurate predictions. Different algorithms, like Artificial Neural Network, Deep Learning, Long Short Term Memory are being used. By using these algorithms, now prediction has become more accurate and efficient. In this paper, the main motive is to predict the stock price of a Nifty 50 share. Here, we are using a LSTM deep learning model. Here our main aim is to study how epochs and batch size influence the model. Here we have taken 2 batch sizes. For each batch size we used 4 epochs and calculated percentage error. Through this, we analysed how batch size

Research Paper: Security in Cloud Computing

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Abstract : Scalable on-demand services are provided to customers using cloud computing, with greater flexibility and with less infrastructure investment. As Cloud services are delivered using classical network protocols and formats over the Internet, implicit vulnerabilities existing in these protocols as well as threats introduced by newer architectures raise many security and privacy concerns. In this paper, we survey the factors affecting Cloud computing attacks and vulnerabilities, and to identify relevant solutions to strengthen the security and privacy in the Cloud environment.

Introduction : Cloud computing (CC) technology has been widely utilised in many areas, including file sharing, real-time applications, and communication. Major Cloud Computing innovations have emerged within recent decades. Cloud Computing has been widely adopted in both the private and public sectors due to the feasibility of its services, which can potentially add convenience at several levels. On the other hand, both cloud customers and cloud service providers place a high priority on the security of the offered services. While there are many problems that need identifying, analysing, and addressing, this document attempts to survey the security in cloud computing and reports on various aspects of security vulnerabilities and solutions. Privileged User Access Management, regulatory compliance, data location, data segregation, and data protection are a few questions that require urgent answers.

It is strongly advised that these issues be considered, along with other dangers.
The following are some possible analyses:

a. Organisation capability and maturity
b. Technology & data risks
c. Performance risk
d. Extended Supply Chain risks
e. Process risks
f. People risks

Additionally, it offers details on popular cloud architectures and frameworks. Also, this study proposes prospective future research areas for cloud computing security.

Literature Review : The National Institute of Standards and Technology(NIST) defined Cloud Computing as, "A model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage etc) that require little administration work or service provider engagement and may be quickly provided and released.

The literature review section will provide a brief overview of CC technology, including its architecture, service models, deployment models, and advantages as well as disadvantages.

(A) Architecture of Cloud Computing: The cloud architecture is generally classified into three cloud service models, they are infrastructure-as-a-service (IaaS), the lowest layer, which provides fundamental infrastructure for the other layers; platform-as-a-service (PaaS), the middle

A Survey on Artificial Intelligence in CyberSecurity

Mr. Aditya A Hadap, Student, PHCASC, Rasayani

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Abstract: The frequency and sophistication of cyberattacks have both greatly increased over the last few decades. Therefore, establishing a cyber-resilient strategy is of utmost significance.In the event of a cyberattack, traditional security measures are insufficient to prevent data leaks. Cybercriminals have mastered the use of cutting-edge methods and powerful tools to hack, attack, and compromise data. Fortunately, artificial intelligence (AI) technology has been applied to the creation of intelligent models for securing systems against attackers. AI technologies can quickly evolve to meet complicated problems, making them useful as fundamental tools in the cybersecurity industry. In this essay, we examine the role of AI in cybersecurity and analyse the essential literature in terms of its advantages.

Keywords: Artificial Intelligence, CyberSecurity, Data leak.

Introduction: The number of cyberattacks has rapidly increased as a result of the continuous growth of computer networks. All facets of our society, including the government, the economy, and crucial infrastructures, rely heavily on computer networks and IT solutions. As a result, they are undoubtedly susceptible to cyberattacks. An attack launched from one or more computers against other computers or networks is referred to as a cyberattack. Cyberattacks typically aim to either damage the target computer, shut down the services, or access the data on the target machine. The frequency and severity of cyberattacks have significantly increased since the first denial-of-service (DOS) assault in 1988. Indeed, maintaining cybersecurity has grown to be one of the most difficult challenges in the field of computer science, and it is expected that cyberattacks will continue to get more sophisticated andnumerous.

Networks, devices, programmes, and data are protected by networks, processes, and practises known as cybersecurity from intrusions, damage, and unauthorised access. The phrase "cybersecurity" refers to a collection of measures and practises, both technological and non-technical, aimed at protecting the "actual geography" of cyberspace, as well as the tools and software used therein and the data transmitted therein, from any foreseeable threats." says Myriam Dunn Cavelty in her definition. One of the most crucial challenges in cyberspace nowadays is cybersecurity.

Traditional cybersecurity techniques rely on static control of security equipment and operate in reaction to an attack. Security systems, for instance, keep an eye on nodes in the event of network intrusion attacks in accordance with a predetermined set of criteria. These procedures hold off until they receive word that an attack has happened. However, the conventional strategy is no longer effective given the rise in cyberattacks.The recent Equifax attack in 2017, which exposed the data of up to 143 million consumers, is one instance of the inadequacies of conventional cybersecurity techniques. Additionally, attackers often

Object Detection with Deep Learning for Underwater Environment

Namreen Silotri , Priyanka Sorte

***Abstract*—** In this paper we have explored the usage of deep learning algorithms for object detection in underwater Environment and specificallywe've employed YOLOv3 algorithm technology in our study.We used available underwater database fortraining and investigated the strategy by experimenting to detect and identify the kind of the fish in an aquarium within the lab. The results are explained during this paper.

Keywords: artificial intelligence, chatbot, chatbots, marketing, big data.

I. INTRODUCTION

The ocean is closely associated with human life, nurturing many sea creatures and occupying most of the earth's area. In the past, folks developed and explored marine resources in the type of shallow water andperformed them manually. Therefore, the scope of operations was limited, the risks were high, the supporting elements were large, so the action was not easy. This study applies the deep learning method to the visual system of underwater robots, replacing humans with machines and exploring the unknown and vast marine fields.

Lots of the underwater imaging methods are using laser [1][2][3]. Considering the rapid development in CPU,GPU and other aspects of computing technology, the processing speed has been greatly improved recently. Nowadays, deep learning has been widely employed in various life-related fields, from basic handwritten text recognition [5], seeing [6], face recognition [7][8], andspeech recognition [9] to automated image descriptions [10]. The Artificial Neural Network is used as a fast- learning algorithm for deep-seated networks [4].

Various methods are used for seeing. Most common approaches employ deep learning nowadays which not only hurries up the popularity, but also improves the accuracy of recognition. the foremost common object recognition methods for deep learning are R-CNN, Fast R-CNN, Mask R-CNN, Faster R-CNN, YOLO, and SSD algorithms. After reviewing our publications on above methods, we picked YOLO algorithm for underwater object detection due to the fast speed and acceptable accuracy.

II. ALGORITHM

A. YOLOv1

The YOLO algorithm [13] is predicated on regression and may perform object detection, positioning andclassification of input images at just one occasion. this sort of algorithm is often used for real-time object detection. We found the functionality of this algorithm acceptable, but the initial version called YOLOv1 came with some limitations. If they appear as a cluster, small objects don't seem to be found. If the image has dimensions aside from the trainingimage, it's difficult to implement the architecture for the generalization of the object. the most problem is that the position of the image within the input image. The architecture of YOLOv1 is presented in Figure 1.

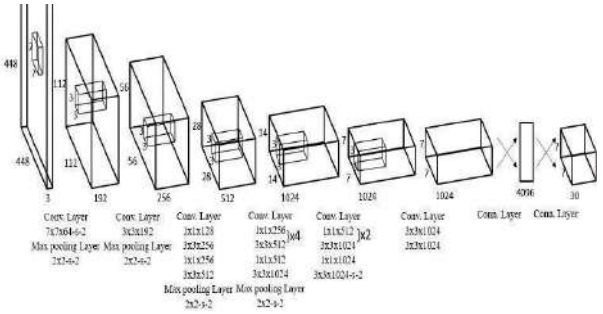

Fig. 1. YOLO architecture

YOLOv1 predicts that every grid unit has multiple connecting boxes. When we train ourselves, we only need the binding box forecast to be responsible for each item. We define a forecast as a "responsible" prediction, based on how high the current predicted IOU is. This leads to a choice between the predictive box predictions. Each forecast can better predict specific sizes, appearance dimensions, or categories of an object, thus improving overall memory.

During the training, we optimized the subsequent multi part loss function:

$$\lambda_{coord}\sum_{i=0}^{S^2}\sum_{j=0}^{B}\mathbb{1}_{ij}^{obj}\left[(x_i-\hat{x}_i)^2+y_i-\hat{y}_i)^2\right]$$

$$+\lambda_{coord}\sum_{i=0}^{S^2}\sum_{j=0}^{B}\mathbb{1}_{ij}^{obj}\left[\left(\sqrt{w_i}-\sqrt{\hat{w}_i}\right)^2+\left(\sqrt{h_i}-\sqrt{\hat{h}_i}\right)^2\right]$$

$$+\sum_{i=0}^{S^2}\sum_{j=0}^{B}\mathbb{1}_{ij}^{obj}\left(C_i-\hat{C}_i\right)^2$$

$$+\lambda_{noobj}\sum_{i=0}^{S^2}\sum_{j=0}^{B}\mathbb{1}_{ij}^{obj}\left(C_i-\hat{C}_i\right)^2$$

$$+\sum_{i=0}^{S^2}\mathbb{1}_{ij}^{obj}\sum_{c\in classes}\left(p_i(c)-\hat{p}_i(c)\right)^2$$

Single Image Super-Resolution Using a Generative AdversarialNetwork

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Guide:-Prof. Priyanka Sorte

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Abstract:

Despite the improvements in delicacy and speed of single imagesuper-resolution using briskly and deeper con- volutional neural networks, one central problem remains largely unsolved how do we recover the finer texture details when wesuper-resolve at large upscaling factors? The geste of optimization- groundedsuper-resolution styles is basically driven by the choice of the objective function. Recent work has largely concentrated on minimizing the mean squared reconstruction error. The performing estimates have high peak signal- to- noise rates, but they're frequently lacking high-frequence details and are perceptually unsatisfying in the sense that they fail to match the dedication anticipated at the advanced resolution. In this paper, we present SRGAN, a generative inimical network(GAN) for image super-resolution(SR). To our knowledge, it's the first frame able of inferring print-realistic natural images for 4 upscaling factors. To achieve this, we propose a perceptual loss function which consists of an inimical loss and a happy loss. The inimical loss pushes our result to the natural image manifold using a discriminator network that's trained to separate between thesuper-resolved images and original print-realistic images. In addition, we use a content loss motivated by perceptual similarity rather of similarity in pixel space. Our deep residual network is suitable to recover print-realistic textures from heavily downsampled images on public marks. An expansive mean- opinion-score(MOS) test shows monstrously significant earnings in perceptual quality using SRGAN. The MOS scores attained with SRGAN are closer to those of the original high- resolution images than to those attained with any state- of- the- art system.

1.Introduction:

The largely grueling task of estimating a high- resolution(HR) image from its low-resolution(LR) counterpart is appertained to assuper-resolution(SR). SR entered substantial attention from within the computer vision exploration community and has a wide range of operations(63, 71, 43).

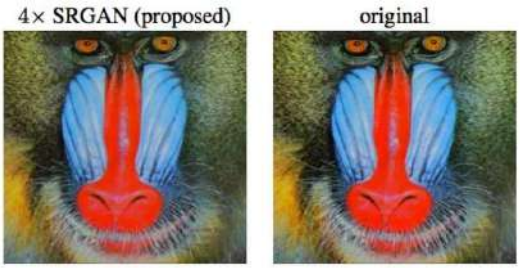

Figure 1Super-resolved image(left wing) is nearly indistin- guishable from original(right).(4 × upscaling)

The ill- posed nature of the underdetermined SR problem is particularly pronounced for high upscaling factors, for which texture detail in the repaired SR images is generally absent. The optimization target of supervised SR algorithms is generally the minimization of the mean squared error(MSE) between the recovered HR image and the ground verity. This is accessible as minimizing MSE also maximizes the peak signal- to- noise rate(PSNR), which is a common measure used to estimate and compare SR algorithms(61). still, the capability of MSE(and PSNR) to capture perceptually applicable differences, similar as high texture detail, is veritably limited as they're defined grounded onpixel-wise image differences(60, 58, 26). This is illustrated in Figure 2, where loftiest PSNR doesn't inescapably reflect the perceptually better SR affect. The perceptual difference between the super-

RESEARCH PAPER:BIG DATA ANALYSIS IN HEALTH CARE SYSTEMS

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ABSTRACT

This paper aims to examine big data, emphasising its use in healthcare and medicine. Value, volume, velocity, variety, veracity, and variability of big data are discussed. Big data analytics in medicine and healthcare includes the processing and analysis of large amounts of highly complex data, including biomedical data, electronic health record data, and various-omics data (genomics, epigenomics, transcriptomics, proteomics, metabolomics, interactomics, pharmacogenomics , and diseasesomics). We draw attention to the demanding privacy and security concerns with big data. Some recommendations for utilizing acceptable and promising open-source distributed data processing software platform are provided in relation to big data properties.

INTRODUCTION

Patients are always calling for better care management, making the healthcare sector one of the most massive and challenging enterprises. There are countless new data records created every day, making it more and more difficult to efficiently gather and evaluate all of the available data. Healthcare organisations throughout the world have presented several types of healthcare information systems in order to provide patients with the finest care and treatments possible. Based on the use of electronic health records (EHRs), vast quantities of complicated biomedical data, and high-quality-omics data, these models offer customised, predictive, participative, and preventative medicine [1]. Electronic Health Records (EHRs) and every other type of digital data pertaining to the healthcare industry have accumulated in immense amounts, necessitating the use of technology and its tools in order to benefit from the data that is now available. The EHRs' data might be discrete or continuous, structured, semi-structured, or unstructured.

Big data is the term used to describe the enormous amounts of information generated by the digitization of everything that has been then gathered and analysed by particular technologies. Electronic health records (EHRs), medical imaging, genomic sequencing, payor records, pharmaceutical research, wearable technology, and other sources are just a few of the places where the data is gathered from. The implementation of healthcare data analytics has many beneficial and even life-saving effects. It makes use of precise health information about a population (or a specific person) and may be useful in preventing epidemics, curing diseases, reducing expenditures, etc. By implementing the use of big data in healthcare, the sector may undergo a major change, moving away from the fee-for-service model and toward value-based care.

Related Work

The volume of generated data is expanding rapidly in many research domains due to the

RESEARCH PAPER: EMERGING ROBOTICS COMMUNICATION METHODS BASED ON ARTIFICIAL INTELLIGENCE

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ABSTRACT

This article examines the progression of artificial intelligence (AI) methods for the application domain of robot communication. The study of how to operate various robots cooperatively to achieve a shared goal is quickly expanding. In many real-world applications, communication between robot team members and even the inclusion of humans is becoming crucial. The survey's primary focus is on robot AI approaches communication to improve the multi-robot team's ability to communicate, creating more complicated activities,taking a well-considered decision, acting in concert,and effectively carrying out their duties.

INTRODUCTION

Artificial intelligence (AI) is being used to advance sciences and technologies because of its incredible capacity for coping with massive data, complexity, and high processing with precision and speed. The well-known AI technologies include artificial neural networks (ANN), fuzzy logic, neuro-fuzzy interference systems (ANFIS), genetic algorithms, pattern recognition, clustering, machine learning (ML), particle swarm optimization (PSO), etc.

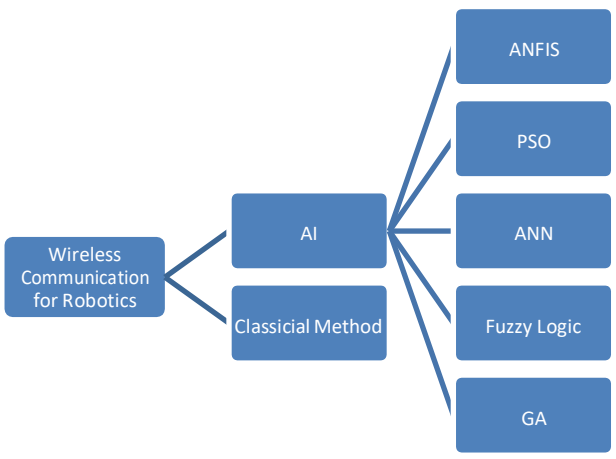


Fig.1 Wireless Robotics Communication using AI approaches

• **ANFIS**

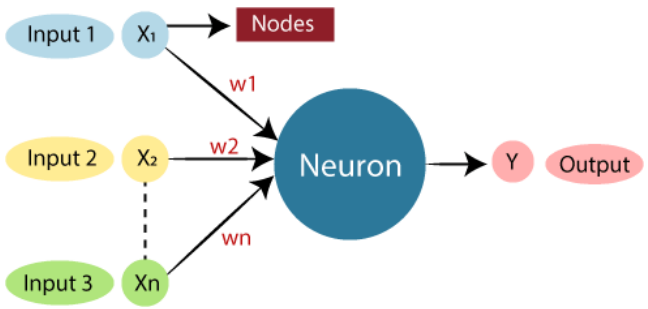
An artificial neural network that is built on a fuzzy inference system is known as an adaptive neuro-fuzzy inference system (ANFIS) or an adaptive network-based fuzzy inference system (ANFIS)[1]. It has the ability to combine the advantages of neural networks and fuzzy logic in a single framework because it blends both of these concepts. Its inference system is a collection of IF-THEN fuzzy rules with the ability to learn and approximate nonlinear functions[2].

• **PSO**

A method of artificial intelligence (AI) known as particle swarm optimization (PSO) can be used to approximatively solve issues involving maximisation and minimization of numerical values that are very challenging or even unsolvable.[3]

• **ANN**

The biological neural networks that form the structure of the human brain are where the phrase "artificial neural network" originates. Artificial neural networks have neurons that are linked to one another in different layers of the networks, just like the human brain works. Nodes is the name given to these



neurons.[4]

Here,

X represents for input nodes.

w represents for weights.

Y represents final output.

FIG.2 ANN NETWORK STRUCTURE [5]

• **FUZZY LOGIC**

Ideas that are unclear or ambiguous are said to as fuzzy. The term Fuzzy logic offers highly useful flexibility for reasoning because it frequently happens in the real world that we are unable to distinguish whether a state is true or false. In this approach, we may take into consideration the ambiguities and imperfections of every circumstance.

DETECTION AND RECOGNITION OF HUMAN EMOTION USING NEURAL NETWORK

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Abstract: It is difficult for computer vision and artificial intelligence to detect and recognize human emotion. Human speech is heavily influenced by emotions. Emotions are primarily used in communication. The major objective of our research is to create a reliable system that can recognize and detect human emotion from live broadcast. A few feelings, such as anger, sadness, joy, surprise, fear, disgust, and neutrality, are shared by all people. The facial detection process is accomplished by extracting the Haar Cascade characteristics from a face using the Viola Jones algorithm, and the emotion is then confirmed and recognized using a Deep Neural Network. This has applications in the areas of surveillance, security etc.

INTRODUCTION

One of the most effective means of communication is the expression of human emotion on the face. Faces are incredibly expressive. It has been discovered that the language aspect of a communication only makes up a meagre 7% of its overall significance, while the tone accounts for around 38% of the total signal and the remaining signifies or portrays 55% of the overall message. A feature The implementation of facial feature extraction is highly sought-after in the disciplines of surveillance (video or image), biometrics, and HCI (human computer interface). Here, reading human emotion is done via face images. The pioneering work of Charles Darwin can be used to trace the history of the study of human emotion. many researchers were drawn to this field. There are seven fundamental emotions that all people experience. These basic emotions—neutral, angry, disgusted, scared, pleased, sad, and surprised—can be recognised from a person's facial expression. Since every person's face is unique, finding a solution to the challenge of recognising facial features is not an easy task. Numerous variables, including physical attributes, sex, DNA, and age, influence the features. The challenge is very difficult due to the extreme variability. When creating an emotion identification system, numerous considerations must be made. Any face processing system's primary step is to accurately detect and classify faces. The facial expression recognition system must function in a variety of environments, including those with changing lighting conditions and other lighting issues, the wearing of eyeglasses, the existence of facial hair, etc. To construct an ideal system, the system should be able to solve some of these issues. Face detection, preprocessing, feature extraction, and face recognition are the four stages of a generic biometric process.

Face Detection

This is the first step in face processing. The main purpose of this step is to detect face from the images from dataset. In this step individual images are taken from the dataset, scanned and then verified wether the image contains a face or just background image. The face determination system determins if the input data(image) is a face. After this step the result is sent for pre-processing so that facial features can be extracted from the face image

THE CURRENT AND FUTURE IMPACT OF ARTIFICAL INTELLIGENCE ON BUSINESS

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Abstract: Artificial intelligence (AI) software is now often used in commercial operations. What technology qualifies as AI is not always clear. The levels or varieties of AI vary. It's important to clarify the capabilities of the technology while discussing artificial intelligence. Businesses employ a basic type of AI with constrained learning capabilities. AI development and use have a range of consequences, from potential job loss or retraining to potential harm to human life. There might be facets of the developing technology that haven't been taken into account yet. AI has the ability to make the world a better place for people. Future developments in artificial intelligence will alter the nature of business. Individuals as well as organizations must embrace technology and comprehend the transformations necessary to succeed in the future in order to get ready for it.

INTRODUCTION

The concept of artificial intelligence is complicated. The definition of AI has been subject to different interpretations, as well. AI comes with a variety of hazards. The major factor affecting those hazards is the level of AI being explored. A self-aware program poses a substantially different risk than a basic artificial intelligence program, or automation. Artificial intelligence has more advantages than disadvantages, particularly in commercial applications. Businesses already use AI software, and this trend is anticipated to continue. Business processes will increasingly use artificial intelligence, necessitating changes from society.

DEFINING AI

Artificial intelligence cannot be characterized in a single way. According to a Forbes article, the author disputes claims made by several businesses that their software has artificial intelligence. A real artificially intelligent system is one that can learn on its own, according to the author. We're referring about neural networks, such as those developed by Google's Deep Mind, that can connect ideas and derive interpretations without relying on pre-established behavioural algorithms. True artificial intelligence (A.I.) can advance from earlier iterations, becoming smarter and more aware, enabling it to increase its powers and knowledge. The author continues by asserting that the development of AI cannot be stopped. Alan Turning is sometimes cited as the pioneer in determining whether a computer is intelligent. Turing recommended that. We should be confident in the intelligence of computers if they had conversational skills on par with humans. Turning proposed the Turning test, a conversational evaluation of human-level intelligence. Three people—an interrogator, a man, and a woman—play a game called the Turing test. The interrogator spends the night in a different room from the other two. The interrogator must identify which of the other players is the computer in order to win the game. The human participant is attempting to assist the

Applying AI In Cybersecurity

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Abstract:-Individuals cannot manage the complexity of activities and the volume of information needed to secure cyberspace without significant automation.But in order to adequately defend against security risks, technology and software with conventional fixed implementations are challenging to design (hardwired decision-making logic). AI machine learning techniques and machine simplicity can be used to treat this issue. This study presents a succinct overview of AI implementations of various cybersecurity utilising artificial technologies and assesses the likelihood of strengthening the defence mechanism to increase cybersecurity capabilities. After reviewing the available artificial intelligence software for cybersecurity, we may assume that useful applications currently exist. They employ neural networks to first secure the perimeter and many other cybersecurity domains.Use neural networks to safeguard the perimeter and many other cybersecurity domains. On the other hand, it was evident that certain cybersecurity issues could only be effectively solved by the application of artificial intelligence techniques. For instance, thorough knowledge is crucial for making strategic decisions, and logical decision support is one of the unresolved cybersecurity concerns.

INTRODUCTION

Given the exponential growth in malware and cyber-arms sophistication over the past two years, it is obvious that only intelligent technologies can aid in the defence against sophisticated cyber devices.

Thefollowing instance: "On January 15, 2009, Conficker damaged the French Navy's computer network "Ultramar". Flights at various airbases were subsequently compelled to land because they were unable to update their flight schedules, leading to the quarantining of the service.Some of its important equipment and computers were contaminated, according to the UK Defense Ministry. Government offices, Navy Star / N * desk divisions, and hospitals in the town of Sheffield have reported that the malware has infected more than 800 PCs.

According to a report from 2 February 2009, the Bundeswehr, the combined military forces of the Federal Republic of Germany, compromised more than 100 of its devices. In January 2010, the Police Central Database was intentionally disconnected for three days by the Greater Manchester Police Information Network.To conduct routine searches on automobiles and people, staff have to get in touch with specific forces. With Network Centric Warfare (NCW), cyber mishaps are particularly dangerous, hence urgent changes to cyber defence are required.In order to implement novel offensive strategies such as dynamic creation of protected perimeters, integrated crisis management, and completely automated reactions to network attacks, it will be essential to deploy artificial intelligence techniques and knowledge-intensive technologies.

Image Processing Using Machine Learning

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Abstract:-The study primarily discusses the mathematical technique demonstration anomaly and the algorithm needed to recognise it. In the subject of pattern recognition, the usage of handwritten mathematical symbols and equations has garnered a lot of interest. Using a novel and sophisticated algorithm, it is now possible to identifythe handwritten characters, a more diverse variety of handwritten digits is now visible. But the handwritten data sets' behaviour is what causes the issue. We develop a more complex handwritten digit representation model based on multiple instance learning (MIL), where a bag contains various digit data from various feature spaces, in order to overcome the limitation that ahandwritten digit data set of distinct features can't compute.This article presents many methods for offline pattern identification utilising various machine learning algorithms. a number of machine learning algorithms, including Convolutional Neural Networks, Support Vector Machines, and Multilayer Perception. Finding the most effective and efficient approach for pattern recognition is the key goal or objective. The study demonstrates how the accuracy of various classification methods varies.The methods of machine learning are typically used in the process of symbol and number identification. A segment binary image is "roughly" classified using the Bayesian network for the first initialization of the symbols. Neural networks are also used for classification utilising contents.

INTRODUCTION

Handwriting is one of the many means we have for connecting with others that have been around for ages. However, as technology has advanced, computers and the Internet have become the most compelling means of modern communication, changing the globe.

Turning around and resettling into a little community. Developers are using a variety of machine learning and deep learning principles to make computers more interactive and intelligent,just like a human learns to execute a particular activity by repeatedly practising it until it becomes second nature. However, there are still issues with handwritten digit recognition.

Typically, there are three steps in it. A series of input strokes are first divided into fictitious symbols (symbol segmentation).A symbol classifier will then recognise hypothetical symbols (symbol recognition). Finally, in order to provide the most likely interpretation of an input OHME, structural relations among the detected symbols are discovered and the expression's structure is examined by a parsing algorithm (structural analysis). It examines various neural utilisedas a tool for various types of challenges.

The goal of pattern reorganisation is to create useful applications and software through the use of digital image processing.Over the years, researchers have done a great deal of work to develop the machine learning and data mining concepts in order

RESEARCH PAPER: HUMAN COMPUTER INTERACTION

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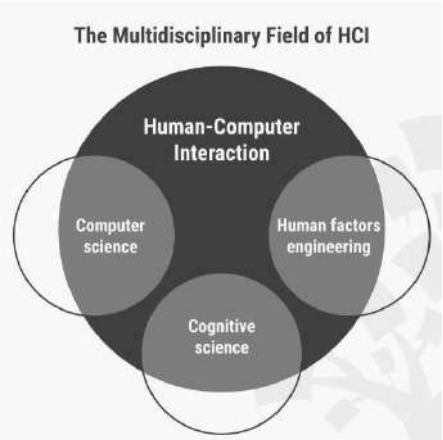
ABSTRACT: The idea of human computer interaction comes because of the advancement in the development of computer technology. The new generation of people (young age group people), who's educated and technically knowledgeable involves research experiments in human computer interaction. HCI (human-computer interaction) covers both technical and human behavioral concerns. The main purpose of practical research in human-computer interaction is to disclose unknown perception about behavior of humans and its relationship to technology. Resilience is just a set of routines that allow us to recover from obstacles. The term resilience has been applied to almost everything from the economy, real estate, events, sports, business, psychology, educational field and more.

INTRODUCTION:

Nowadays the growth of computing is rapidly increasing. And also use of computers for the human is essential in various tasks. HCI (human-computer interaction) is the study of interaction of people with computers and also their behavior i.e. how people interact with computers

Human-computer interaction (HCI) is a multidisciplinary field of study focusing on the design of computer technology and, in particular, the interaction between humans (the users) and computers. While initially concerned with computers, HCI has since expanded to cover almost all forms of information technology design.



Human-Computer Interaction (HCI) is a subfield within computer science concerned with the study of the interaction between people (users) and computers and the design, evaluation and implementation of user interfaces for computer systems that are receptive to the user's needs and habits. It is a multidisciplinary field, which incorporates computer science, behavioural sciences, and

ROBOTICS

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ABSTRACT: This paper contains of detailed statistics about the robot's functioning and system. As one and all knows, how artificial intelligence is rising in the business and the request is entering completely reliant on artificial intelligence for responsibility the multifaceted tasks. We can suppose about it but still 0 doesn't unkind that it'll not have any point of inaccuracy but it means it'll give you the accurate rejoinder for every question without any mistrustfulness. show off its uses its detailed data how it workings and how it senses working out each is signified in this paper which will be enough for getting and good information about robotics and bias along with the system of robots. perturbation is mounting that robots and artificial intelligence will change numerous assertions.

INTRODUCTION:

Robot is a mortal thing which is able of doing all the work the human can perform in a much lower time than a human can take the place of a mortal but it can help humans for operating much of its task in diurnal life. Robots are also operations of artificial intelligence and detectors which combine together to form a mortal machine called robots. There are multitudinous operations of robots in the world of research and computer operation. Scientists and masterminds are working on robots to make it nearly applicable in every field. It can be semi-automatic or completely automatic that's there are numerous robots which are like mortal that's they can talk, they can walk without the guidance of a mortal through programmable language input into them at the time of manufacturing it but there are also semi-automated that's the needle remote for the controllability of its functioning. Robotics is one and only

topmost intriguing branches in the arena of science and education which is loved by every youth and everyone wants to learn robotics for unborn use. There are Number of uses in the future where people will be depending on completely automated drama full complex stars as glowing as for everyday workshop as well as it'll drop force in the world because one robot is complete of doing work of 10 persons.

RESEARCH PAPER: ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN FOOD INDUSTRIES

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ABSTRACT: The use of artificial intelligence (AI) is silently reducing human-to-human interaction and hastening the automotiveization of the globe. These developments are geared towards quick mass manufacturing and precise yet organised supply chains and delivery to please every end user, as their contentment provides many justifications for why a specific industry should rule and dominate the worldwide market. Some of the most well-known high-end technologies that make use of artificial intelligence (AI) and machine learning (ML) for manufacturing, processing, and delivering qualitative and quantitative products with little expenditure of money, labour, or time are robots and data processing mechanisms. Nowadays, even new or small companies like cafes, quick food outlets, restaurants, etc.

INTRODUCTION:

Before we discuss the food's quality, it is important to note that any edible and nutritious food provides a basis for at least surviving. The food industries are responsible for acquiring unprocessed food from farmers and regional producers, which they subsequently refine, prepare, and package into a suitable edible source for their clients. Second, the desire to improve the quality of the same food is a severe problem and the most crucial element for any food processing firm [1]. If a customer spends money on a certain food product, or at the very least, its basic materials, it most often reflects a negotiation that needs both qualitative and quantitative outcomes [2]. There are infrequent agreements between buyers and sellers to evaluate a product's standardisation in order to generalise expertized nonsystematic principles and stop using classifier preparations [3]. As a result, the modern market, which has researched consumer behaviours and demands for suitable execution, will take care of measurable quality grading procedures. This will be beneficial for both marketing managers and customers. The food industry is currently unable to apply these classifier preparations because they are expensive and time-consuming, leaving behind ineffective training techniques that are prone to mistakes that repeat themselves and undermine company convictions [4]. Contrarily, the food industry is implementing more affordable and accurate testing to challenge various humantendencies, making it virtually impossible to makethesame errortwice whendoing food quality checks.[5]

LITERATURE:

Food revenue forecasting is one of the most important difficulties that the food industry frequently faces because any decision made here will determine the company's success or failure in the market in the next days. It does not, however, always remain volatile. While many prediction jobs are successful, the

A Study of the Impact of Technology on the Society

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ABSTRACT

This exploration paper seeks to identify the positive and negative effect of ultramodern technology on the society and it analyses the possible issues which has affected the geste of people at plant and in the network. Technology has changed the life. Technology has come an necessary piece of our life. Every time and far and wide we need some kind of Technology to get our requirements fulfilled. This paper tries to identify the effect of technology on different parts of society which are being converted and ever getting deteriorated. It is up to us to determine whether technology is a help or hindrance, based on how we utilize it and the benefits we can reap from it. Technology is of multitudinous types, for illustration, information technology, mechanical technology, creation Technology, Communication Technology etc. Technology has redounded in better education, better particulars, better mode of communication, better transport, better quality of wares and enterprises etc. And yet it's having some negative goods on the society, for illustration, adding impurity, drop in creativity of people, further reliance on machines and Technology, negative effect of mobile halls etc. Everyone needs to suppose and decide about how one can use the Technology in an ideal manner.

INDEX TERMS: Information Society, Social Construction of Technology, Actor-Network-Theory

1: INTRODUCTION

Technology has come measureless moment. Technology means the handy application of knowledge and principles for creation of products or picture of services. The word technology comprises of two sections Techno Logy. The term" Techno" means operation, workmanship or capability, and" Logy" means wisdom and literacy. 21st century is witnessing Rapid development in the technological advancement and advancement in assembling, drug, transportation, Information and Communication Technology etc. In the last several decades, there has been an immense transformation in computing and communication, and all signs point to a steady and fast-paced development of technology and utilization of information technology in the years ahead. The cost of dispatches has gone down significantly due to advancements in technology and increased competition, coinciding with the dramatic rise in power and usage of new information technologies. Moore's law states that the capabilities of microchips are increasing at a rapid rate, doubling every 18 months. This exponential development offers a wide range of opportunities, but also presents a variety of challenges. moment, inventions in information technology are having wide- ranging goods across multitudinous disciplines of society, and policy makers are acting on issues involving profitable productivity, intellectual property rights, sequestration protection, and affordability of and access to information. Choices made now will have longlasting consequences, and attention must be paid to their social and profitable impacts. One of the most significant issues of the progress of information technology is presumably electronic commerce over the Internet, a new way of conducting business. Although it is still relatively new, this development could have a significant effect on economic practices and the social landscapeIt implies the flawless operation of information and communication technology along the entire value chain of a business that's conducted electronically.

Alzheimer's Detection Model Using Machine Learning

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ABSTRACT

Alzheimer's complaint(announcement), an irrecoverable brain complaint, impairs thinking and memory while the aggregate mind size shrinks which at last prompts demise. Alzheimer's is a neurodegenerative complaint and leads to severe memory loss and incapability to manage with diurnal life tasks. Beforehand opinion of announcement is essential for the progress of further prevailing treatments. Detecting Alzheimer's is a delicate and time consuming task, but requires brain imaging report and mortal moxie. Dispensable to say, this conventional approach to descry Alzheimer's is expensive and frequently error prone. In this design an indispensable approach has been bandied, that's presto, costs less and more dependable. Artificial intelligence systems can help in furnishing better health care and medical results. The performance of mortal opinion degrades due to fatigue, cognitive impulses, systems faults, and distractions. still, artificial intelligence grounded opinion systems are less error prone and give safe support to clinicians in discovery and decision timber. This work presents a smart and dependable way of diagnosing Alzheimer's complaint(announcement) and its possible early stage i.e., mild cognitive impairment. The presented frame is grounded on deep literacy and detects Alzheimer's and its original stages directly from structural MRI reviews. relating mild cognitive impairment(MCI) subjects who'll progress to Alzheimer's complaint isn't only pivotal in clinical practice, but also has a significant eventuality to enrich clinical trials. This design proposes to combine MRI data with a neuropsychological test,Mini-Mental State Examination(MMSE), as input to amulti-dimensional space for the bracket of Alzheimer's Disease(announcement) and it's prodromal stages.

KEYWORDS: Artificial Intelligence, Alzheimer's disease (AD), Machine learning, Accuracy, Classifier models.

I. INTRODUCTION

Machine Literacy is used to interpret and dissect data. likewise it can classify patterns and model data. It permits opinions to be made that couldn't be made generally exercising routine systems while sparing time and trials. Machine literacy methodologies have been considerably used for computer- backed opinion in medical image conformation mining and reclamation with wide variety of other operations especially in discovery and groups of brain complaint using CRT images andx-rays. It has just been generally late that announcement specialists have tried to apply machine literacy towards announcement vaticination. As a consequence, the literature in the field of Alzheimer's complaint vaticination and machine literacy is fairly small. still, moment's imaging technologies and high outturn diagnostics have lead us overwhelmed with large number(indeed hundreds) of cellular, clinical and molecular parameters.

1.1 Motivation

In current circumstances, the standard measures and mortal instinct do n't constantly work. That's the reason we must depend on intensely computational and unconventional approaches similar as machine literacy. The custom of using machine literacy as a part of complaint vaticination and visualization is a scrap of an expanding shift towards visionary and tailored tradition. This drift is important, not only for the cases in adding their quality of life and life style, but for croakers in making treatment opinions and also for health economists.

Survey of Machine learning algorithms for dynamic resource pricing in Cloud

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Abstract :-

The paper provides insights of various machines learning algorithm that could be helpful in deriving the dynamic pricing of resources in cloud. Currently machine learning has impact on many IT and non IT sectors. At the same time because of great change in computing from on premise to cloud computing many big companies has opted cloud computing in which resources are provided on demand basis via internet. On the basis of resource usage machine learning algorithm help to predict the future demand and also help in deciding the price of resource at the time of request (spot request).

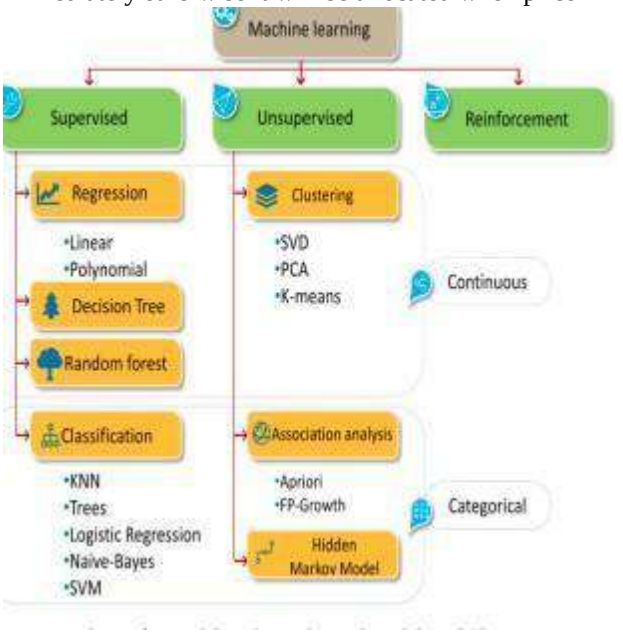
Keywords :- : cloud computing, cloud pricing, machine learning algorithms

INTRODUCTION:-

One of the aims of machine learning algorithms is prediction. Like linear regression, multiple regression algorithms help various sectors to increase profitable opportunities by forecasting demand. Forecasting can be based on the past data sets. As cloud services are delivered on demand basis the future demand of recourses can be forecast by using these machine learning algorithms and new pricing model can be derived. The paper has started with cloud computing and its pricing policies(1.1), brief about machine learning algorithm and its categories(1.2), literature surveyed on machine learning algorithm is represented under heading(2), conclusion(3).

1.1Cloud Computing and pricing policies- cloud computing are the services provided over the internet, like other utility consumer needs to pay the bills as per the consumption. There are various layers of services provided by cloud like software as a service (SaaS), platform as a service (PaaS), infrastructure as a service (IaaS) etc are presented in Table-1. The major reasons for the companies opting cloud is security, scalability, fast data recovery etc. Big cloud providers are Amazon (AWS), Google (Google cloud), Microsoft, IBM etc.

The cloud providers have their own policies to charge for the services like Amazon has on demand pricing, reserved pricing and auction based. With On-Demand instances, user pays for compute capacity by the hour with no long-term commitments or upfront payments. User can increases or decreases their compute capacity depending on the demands of the application and only pay the specified hourly rate for the instances they use. [1] Reserved Instances provide you with a significant discount (up to 75%) compared to On-Demand instance pricing. In addition, when Reserved Instances are assigned to a specific Availability Zone, they provide a capacity reservation, giving you additional confidence in your ability to launch instances when you need them. [2] Auction pricing was proposed by Amazon EC2 which whether or not a subscriber obtains the VM depends on the price it offers. It is also known as dynamic pricing. Auction based pricing is fair for both customer and service provider because the price is set as per the level of demand and supply [3]. In auction pricing there are two terms first spot price and second bid price. For using spot instance the customer can request for instance (spot request). Request contains the bid price also. If the bid price is greater than the spot price the resource will be allocated to the customer immediately otherwise it will be allocated when price



of

RISE OF AI IN HEALTHCARE STARTUPS IN INDIA

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INTRODUCTION

Artificial Intelligence (AI) has been revolutionizing many industries in recent years, including healthcare. AI-powered healthcare startups are changing the way healthcare is delivered and improving patient outcomes. India is home to a growing number of healthcare startups that are leveraging AI to improve healthcare delivery. The use of AI in healthcare startups has the potential to revolutionize the way healthcare is provided, from improving patient outcomes to reducing costs and increasing access to quality care. This research paper aims to examine the rise of AI in healthcare startups in India, exploring its benefits and challenges, and its impact on the healthcare industry as a whole. The paper will also analyze the current state of AI in healthcare startups in India and its future potential, providing insights into the opportunities and limitations of AI in healthcare delivery.

BACKGROUND

The healthcare industry in India is one of the largest in the world and is rapidly growing. However, despite its size, the industry faces several challenges, such as a shortage of healthcare professionals, limited access to quality care, and inadequate medical infrastructure. AI-powered healthcare startups are emerging as a solution to these challenges, providing innovative and efficient healthcare services to patients. The literature on the rise of AI in healthcare startups in India is limited but growing. Research in this area has focused on the potential benefits and challenges of AI in healthcare delivery, as well as its impact on the healthcare industry in India. The following is a review of some of the key studies in this area.

One study (Gupta, 2020) explored the potential of AI in healthcare startups in India, focusing on its ability to improve patient outcomes and reduce costs. The study found that AI algorithms can be used to improve the accuracy of diagnoses, enabling healthcare professionals to make more informed decisions about patient care. The study also found that AI can be used to automate repetitive tasks, freeing up healthcare professionals to focus on more critical tasks, such as patient care.

Another study (Chakraborty et al., 2019) investigated the impact of AI on telemedicine services in India. The study found that AI-powered telemedicine services have the potential to improve access to quality care, particularly in rural areas where medical resources are limited. The study also found that AI can be used to support remote patient monitoring, enabling healthcare professionals

AI IN HEALTHCARE STARTUPS IN INDIA:

AI is being used in a variety of ways in healthcare startups in India. For example, AI-powered diagnostic tools are helping healthcare professionals make more

RESEARCH PAPER ANALYSIS AND DESIGN OF MODERN HOUSES USING AI.

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ABSTRACT:

Artificial intelligence is widely used in the construction sector, and its progress in recent decades has had a significant impact on human life. Because of how basic and profound these changes are, it is necessary to alter design thinking in order to accommodate the new school of thought and take advantage of technical advancements. Artificial intelligence has started to appear in contemporary house design thanks to the growth of the economy and technology as well as the ongoing development of scientific and technological intelligence equipment. Using automobile models and artificial intelligence to design contemporary dwellings can make significant progress. The goal of this research is to better understand artificial intelligence, smart houses, how to control and optimise energy usage, and how to urbanise people's life. Constructing intelligence and subsequently smart houses were initially only ideas without a solid foundation. However, modern homes feature interfaces that automatically manage security and remote-control systems. Artificial intelligence is used in home architecture to achieve two objectives, including how individuals interact with their surroundings and feel at home. The library is used as the tool for data collection and the research methodology. The findings demonstrate that the smart home is centred on smart grid technologies to lower energy purchase tariffs, improve comfort, and boost consumer energy distribution reliability. Artificial intelligence encourages the optimization of living quality and can significantly cut down on daily operational time and energy costs. This essay's goals are to list the benefits of using artificial intelligence to contemporary house design, consider its drawbacks, and consider what the technology's possibilities for the future may hold.

INTRODUCTION

Artificial intelligence (AI) has taken root in our daily lives after decades of evolution and has significantly influenced the fields of architecture and reliability. Building design using energy efficiency, predicting and minimising energy consumption, planning to reduce its effects on the environment and climate, and improving the security and comfort of the living environment are all applications of artificial intelligence in sustainable architecture. Additionally to enhancing resident comfort and convenience and creating high-quality living circumstances, smart home technology effectively focuses on consumption control and optimization in the home. One of the most fundamental smart house design technologies is the smart home management system, which was initially presented in the United States. The majority of the groups involved in construction projects, such as

AI IN EDUCATION AND TEACHING

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Abstract - Artificial intelligence is undergoing an unheard-before phase of fast development that is radically altering all facets of life . The state required a thorough curriculum , but it still doesn't address how to get to artificial intelligence curriculum. To encourage the adoption of artificial intelligence education and the development of cognitive and pedagogical abilities, this essay integrates artificial intelligence with research on teaching reform**.** This object collects data using the query analysis method, and then uses the distribution technology and the most recent technological procedure to examine the data. It is concluded that in real life , teachers are more knowledgeable about typical artificial intelligence goods like smart homes, identity, fingerprint recognition, and sound and graphics aids. The most popular platform for instructors online training is their mobile application for classroom management, followed by it . With the aid of intelligent classrooms , robotic assistants , and other significant future teaching intelligent items , some teachers employ automatic corrective assignment systems in the classroom . Artificial intelligence has a positive effect on teachers by reducing workload and enhancing information literacy. Naturally, very few educators believe that artificial intelligence has little to no impact on educator professional development . Teachers are aware of how artificial intelligence works. 52.1% of educators believe that artificial intelligence is extremely beneficial to teachers' professional growth. Artificial intelligence, in the opinion of 32.3% of instructors, is more beneficial to their professional development . Artificial intelligence is recognised by 12.5% of teachers. Only 3.1% of educators nationwide think artificial intelligence hinders their professional progress.

INTRODUCTION

The advancement of artificial intelligence technologies in recent years has been positive. The world has seen a rise in related activities like academic conferences, research, and technological competitions in the area of artificial intelligence. Technology and application development have advanced and expanded quickly. Additionally, the ongoing development of intelligent devices has significantly improved peoples' access to convenience and innovation in their daily lives and work. The advancement of robotics research hasdevelopment of many artificial intelligence ideas, and there are some Technology that can be applied in world state modelling and the explanation of world state changes in artificial intelligence research. The teaching of artificial intelligence should appropriately integrate practical content, such as robot programming and behaviour development, in light of the status and influence of robotics. This can make professional students' programming more enjoyable and fulfilling. Additionally, it can help us grasp the concepts and methods of artificial intelligence. People's methods of receiving information, communicating with others, and learning have all changed dramatically as a result of the growth of Internet technology. synthetic intelligence has

SEMI SUPERVISED SEQUENCE LEARNING IN NATURAL LANGUAGE PROCESSING

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Abstract - We outline two methods for enhancing sequence learning using recurrent networks using unlabeled input. Predicting what will happen next in a series is the first strategy, which is a standard language model in natural language processing . Utilizing a sequence autoencoder , which reads the input sequence into a vector and predicts the input sequence once more, is the second strategy. For a subsequent supervised sequence learning algorithm, these two techniques can be utilised as "pretraining" steps. In other words, further supervised training models can be started using the parameters collected from the unsupervised step. In our tests, we find that long short-term memory recurrent networks are more stable and generalise better after being pretrained with the two ways. We can train lengthy short term recurrent networks up to a few hundred timesteps with the help of pretraining, and as a result, we are able to achieve strong performance in various text classification tasks , including IMDB , DBpedia , and 20 Newsgroups .

INTRODUCTION

Recurrent neural networks(RNNs) are effective modelling tools for sequential data , but they can be challenging to train by back-propagation across time [36, 26] [8]. For this reason, despite their prowess at representing sequential structures, RNNs have not been widely applied to natural language processing applications like text classification. We discover that Long Short-Term Memory recurrent networks (LSTM RNNs) can be trained to perform well on a variety of document classification tasks with appropriate hyperparameter adjustment. Furthermore, LSTM training can be greatly stabilised by a quick pretraining step. As an unsupervised technique, we can utilise a next step prediction model , or recurrent language model in NLP . Another approach is to read a lengthy input sequence into a single vector using a sequence autoencoder, which employs an RNN. The original sequence will then be recreated using this vector. To enhance training and generalisation, the weights derived from these two pretraining techniques can then be used as an initialization for typical LSTM RNNs . LSTMs pretrained using recurrent language models or sequence autoencoders typically perform better than LSTMs initialised randomly in our research on document classification with 20 Newsgroups and DBpedia and sentiment analysis with IMDB and Rotten Tomatoes . Without extra data, our pretraining enables LSTMs to match or improve upon prior baselines on these datasets. Another significant finding from our research is that the generalisation of a subsequent supervised model can be enhanced by pretraining on additional unlabeled data from similar tasks. For instance, increasing classification accuracy on Rotten Tomatoes from 79.7% to 83.3% by pretraining the sequence

POTATO PLANT DISEASE CLASSIFICATION USING CNN

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Abstract

Potato is a globally important crop, and its yield and quality can be significantly impacted by various diseases. Accurate and timely detection of these diseases is critical for effective management and control. In recent years, deep learning techniques have shown promise for automated disease detection in various crops. In this paper, we propose a convolutional neural network (CNN) model for potato plant disease classification on leaf images. This model was trained and evaluated using a publicly available dataset of potato plant images. We achieved an accuracy of 96.7% from test set, demonstrating the potential of our approach for accurate and automated disease detection. The proposed model could be integrated into a smartphone application or other mobile device to provide farmers with a simple and effective tool for disease diagnosis in the field. This would enable more efficient and targeted management of potato plant diseases, ultimately leading to improved crop yields and quality.

1) Introduction

Potato is one of the extensively grown crops, and its yield and quality are often affected by various diseases. The traditional approach to disease diagnosis involves visual inspection of plants by experts, which can be time-consuming and subject to human error. Automated disease detection and classification methods have the potential to enormously enhance the precision and capability of disease diagnosis, best to upgrade crop yields and variety.

CNN have shown remarkable promise for automated disease detection in various crops. In certain studies have explored the use of CNNs for plant disease classification, including tomato, rice, and grape. However, to the best of our knowledge, there have been few studies on the application of CNNs for potato plant disease classification.

In this paper, we propose a CNN-based model for potato plant disease classification based on leaf images. The proposed approach can potentially provide farmers with a simple and effective tool for disease diagnosis in the field, ultimately leading to improved crop yields and quality.

2) Literature review :

Potato is an important crop, and its yield and quality can be severely impacted by various diseases, including late blight, early blight, and black dot. Prior and precise detection of the diseases is critical part of effective management & control. Traditional approaches to disease diagnosis, such as visual inspection, can be time-consuming, labor-intensive, and subject to human error. Automated disease detection and classification methods have

A SURVEY ON BLOCKCHAIN AND ITS SECURITY

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Abstract:

Blockchain technology is a shared records that permit for reliable and crystalline record-keeping of transactions. Its potential applications are diverse, from financial transactions to supply chain management and beyond. However, security concerns remain a challenge for widespread adoption. This paper provides an overview of blockchain technology, its key features, and its potential applications. It then explores the security issues that arise in blockchain, such as 51% attacks, smart contract vulnerabilities, and privacy concerns. Finally, the paper discusses the current state of security measures in blockchain and proposes some potential solutions to address the security challenges. The paper concludes that while blockchain has enormous potential, further research and development are needed to ensure its security and wider adoption.

Keywords: Blockchain, Applications, Security of blockchain, Cryptographic Hash, distributed ledger,Smart contract.

1) Introduction

Blockchain is a distributed digital ledger technology that has gained immense attention and popularity in recent years. Originally developed as the underlying technology for Bitcoin, blockchain has evolved to become a versatile tool for a wide range of applications beyond cryptocurrency. The technology is essentially a database that allows for the creation of a digital ledger of transactions that can be shared across a network of computers. This decentralized and transparent nature of blockchain makes it an attractive option for various industries seeking to improve transparency, security, and efficiency in their operations.The important feature is temper-proof ledger of transaction of blockchain, which eliminates the require in-between such as banks or payment processor. This paper provides an overview of blockchain technology, its key features, and its potential applications. It also explores the security issues that arise in blockchain and proposes some potential solutions to address the security challenges.

Blockchain technology is a shared records that permit for reliable and crystalline record-keeping of transactions. It is essentially a decentralized database that allows for the creation of a digital ledger of transactions that can be shared across a network of computers. The technology was originally developed to support Bitcoin, the first decentralized cryptocurrency, but has since evolved to become a versatile tool for a wide range of applications. The lead innovation of block chain is its capability to produce a digital ledger that is tamper-proof and transparent, which eliminates the important in between many transactions. This paper will provide an introduction to blockchain technology, its key features, and its potential applications. It will also examine some of the security concerns that arise in blockchain and how they are being addressed.

AI BASED MULTIFUNCTIONAL ROBOT

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ABSTRACT :

In this Research paper, we will learn how to do programming in Arduino. How to take digital, analog, and serial inputs and where to store them? All questions will answer in this project. Where can we write comments? We can write comments in starting, ending, or in between programming. Comments starts with // or /* and */. They do not affect code.

Operators: An operator is a symbol that tells the compiler to perform a specific mathematical or logical function.

Variables: Variables: A variable is an area in which data can be stored. It has a name, a value, and a type. There are 3 types of variables: Boolean, Integer, Character.

Once confirmed, see how to assign boolean, integer, and personal variables.Where you specify, variables can be very important. What is the configuration? The setup() functionality is known when the balloon starts. Use it to initialize variables, lock mode, start using libraries, etc. The setup() function is most easily executed once, each time you power on or reset your Arduino board.See in the video how to perform the operations described above, e.g. how you increase and decrease resistors, etc. In programming, the "IF statement" is commonly used.

KEYWORDS : AI, Technology, Robot, Arduino

INTRODUCTION :

Robotics is a field of engineering that deals with the design, construction, operation, and application of robots. Robotics can be found in many different areas of science, including manufacturing, electronics, and computer science. The word robot comes from the Czech word robota, which means bondage or drudgery. The term "robot" was first used in Karel Čapek's play "R.U.R., who introduced the word to the world in 1920.

robots can be classified as general purpose or specialized. A general purpose robot can perform many different tasks, while a specialized robot can only perform one type of task. A robot can be built to take human form to interact with humans, and these robots are called humanoid robots.The word robotics was coined by science fiction author Isaac Asimov in 1954 and comes from the word "robot"; presented to the public by the Czech writer Karel Čapek in his play "R.U.R." (Rossum Universal Robots).

CONTROL YOUR SMART DEVICES WITH CHATBOT

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ABSTRACT :

Chatbots have been around for a while and they are now being used by many big companies such as Facebook and Google. They are also being used in various industries such as banking, retail, and healthcare. Chatbots can be created using different platforms like Adafruit and IFTTT.

Chatbots are becoming increasingly popular as a way to interact with customers and provide customer service. They are computer programs designed to simulate conversations with users, especially on the internet. Chatbots can be used to answer frequently asked questions, provide product or service information, and even process orders.

The aim of this article is to show people how they can control their smart devices by using chatbot and the tools mentioned above.

Chatbots are a new trend in the digital world. They are designed to provide customer service and automate common tasks. Chatbots can be used for various purposes:

- In marketing, chatbot can be used to help customers find the right products or services.
- In healthcare, chatbot can be used to help patients with their problems or questions.
- In banking, chatbot can be used to answer customer's queries and provide them with information about their accounts.

KEYWORDS : Chatbot, Adafruit, IFTTT, Chatfuel

INTRODUCTION :

A chatbot is an artificial intelligence (AI) application that can mimic a real conversation with a user in their natural language. It is programmed to answer questions and provide information in response to questions. Chatbots are used on websites, mobile apps, and other virtual environments for customer service or information gathering. Chatbot usage has increased dramatically since their inception in the 1990s and can be found on over of the most popular messaging platforms including Facebook Messenger, Slack, Microsoft Skype, WeChat and Telegram.Chatbots have been integrated into a variety of industries, including retail, banking and finance, entertainment, and media companies like Spotify and Netflix.

Chatbots are designed to respond to the natural language queries and perform any of the tasks that a human customer service representative would do. There are many use cases of chatbots, such as customer service, content generation, and advertising.

Chatbots are a new and innovative way to interact with people. They can be used for customer service or as a digital assistant. Chatbots are also known as conversational agents, chatterbots, chat bots, or IM bots. They can be used for customer service and in many other ways.

IMAGE CAPTION GENERATOR WITH CNN & LSTM

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Abstract—**With the advancement in Deep learning techniques, availability of huge datasets and computer power, we can build models that can generate captions for an image. In this project, we systematically analyze a deep neural networks based image caption generation method. With an image as the input, the method can output an English sentence describing the content in the image. We analyze three components of the method: convolutional neural network (CNN), recurrent neural network (RNN) and sentence generation. We implemented in this Python based project various deep learning techniques of Convolutional Neural Networks and a type of Recurrent Neural Network (LSTM) together.**

1. INTRODUCTION

Image caption generator is a task that involves computer vision and natural language processing concepts to recognize the context of an image and describe them in a natural language like English. The objective of our project is to learn the concepts of a CNN and LSTM model and build a working model of Image caption generator by implementing CNN with LSTM. In this Python project, we have implemented the caption generator using CNN (Convolutional Neural Networks) and LSTM (Long short term memory). The image features will be extracted from Xception which is a CNN model trained on the imagenet dataset and then we feed the features into the LSTM model which will be responsible for generating the image captions. Convolutional Neural networks are specialized deep neural networks which can process the data that has input shape like a 2D matrix. Images are easily represented as a 2D matrix and CNN is very useful in working with images. It scans images from left to right and top to bottom to pull out important features from the image and combines the feature to classify images. It can handle the images that have been translated, rotated, scaled and changes in perspective. CNN is basically used for image classifications and identifying if an image is a bird, a plane, etc.

LSTM stands for Long short term memory, they are a type of RNN (recurrent neural network) which is well suited for sequence prediction problems. Based on the previous text, we can predict what the next word will be. It has proven itself effective from the traditional RNN by overcoming the limitations of RNN which had short term memory. LSTM can carry out relevant information throughout the processing of inputs and with a forget gate, it discards non-relevant information.

2. PROBLEM STATEMENT

To design a system to generate a Accurate caption based on the Input Image using Convolutional neural Network (CNN) and Long Short Term Memory algorithm (LSTM).

3. DATASET

Data are the basis of artificial intelligence. People are increasingly discovering that many laws that are difficult to find can be found from a large amount of data. In the image description generation task, there are currently rich and colorful datasets, such as Flickr8k, Flickr8k_sau and gradually become a trend of contention. For the image caption generator, we have used the Flickr_8K dataset. There are also other big datasets like Flickr_30K dataset but it

Robust Load Balancing with Machine Learned Advice

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Abstract - **Motivated by the exploding growth of web-based services and the importance of efficiently managing the computational resources of such systems, we introduce and study a theoretical model for load balancing of very large databases such as commercial search engines. Our model is a more realistic version of the well-received balls-into-bins model with an additional constraint that limits the number of servers that carry each piece of the data. This additional constraint is necessary when, on one hand, the data is so large that we can not copy the whole data on each server. On the other hand, the query response time is so limited that we can not ignore the fact that the number of queries for each piece of the data changes over time, and hence we can not simply split the data over different machines In this paper, we develop an almost optimal load balancing algorithm that works given an estimate of the load of each piece of the data. Our algorithm is almost perfectly robust to wrong estimates, to the extent that even when all of the loads are adversarially chosen the performance of our algorithm is 1 – 1/e, which is provably optimal. Along the way, we develop various techniques for analyzing the balls-into-bins process under certain correlations and build a novel connection with the multiplicative weights update scheme.**

1. Introduction

Due to the rapid growth of serving demand, web based services face challenging resource allocation problems in their data centers. Driven by the requirement of sub-second latency response, data centers replicate the data across distributed machines to accommodate serving queries in parallel. With a massive number of real time queries to serve on a daily basis, *load balancing* becomes a critical challenge in resource management and lies in the core of distribution system design.

The *balls-into-bins* paradigm is the most fundamental model for load balancing in real-time distributed systems . In the classical balls-into-bins problem, we model the real-time requests as balls and the servers as bins. In each round, a memory-less allocation algorithm places the incoming balls into one of the bins. The goal is to balance the number of balls assigned to the bins, commonly referred as loads. Constrained by the latency requirement, the algorithm is only allowed to look at the loads of a few bins. The most well-established result in the context of balls-into-bins is the *power of two choices*, or more generally, the *power of d choices* algorithm which looks at *d* bins uniformly at random in each round and assigns the ball to the bin with the minimum load. The maximum load of all bins is then bounded by

$$\frac{T}{n} + O\left(\frac{\log\log n}{\log d}\right)$$

where *n* is the number of bins and *T* is the number of balls.

The classical formulation of balls-into-bins is extensively studied in the literature [6, 41, 11, 40, 20, 17, 31, 2, 38], as it captures several applications including hashing, share memory emulations and jobs allocations. However, in modern distributed service systems such as web search engines, there is a significant gap between the theory and practice. In these modern applications, since the size of the whole data is very large, each piece of the data (e.g. one dataset) is only replicated across a few machines, and the replication is *fi fixed* throughout the time. As a consequence, a query

VIRTUAL REALITY

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Abstract: Virtual Reality (VR) is an advanced, human-computer interface that simulates a realistic environment. The participants can move around in the virtual world. They can see it from different angles, reach into it, grab it and reshape it. There is no little screen of symbols for manipulation nor commands to be entered to get the computer to do something. The term "virtual reality" is credited to Jason Lanier, who was the founder of VPL Research. The term cyberspace was coined by William Gibson in his 1984 science fiction novel, Necromancer. Cyber space is thought of as the ultimate virtual reality environment. It is an alternative computer universe where data exists like cities of light. Information workers use a special virtual reality system to enter cyberspace and to travel its data highways. This gives them the experience of being physically free to go anywhere. Virtual reality feeds off a variety of fields. It is more a convergence of previously aisparate disciplines than a whole new branch of technology. Virtual reality involves electronic and mechanical engineering, cybernetics, database design, real-time and distributed systems, simulation, computer graphics, human engineering, stereoscope, human anatomy and, even, artificial life. The many challenges for creating virtual reality systems include: software, hardware, human factors and VR over high-speed networks.

I. INTRODUCTION

"VR is a very high end computer interface that evolves real time simulation and interface through numerous sensorial channels. These sensorial modalities are visual, aural, tangible, smell, taste and other senses." The first traces of virtual reality came from the short story "Pygmalion's Spectacles" in 1935by Stanley G. Weinbaum's is recognized as one of the first works of science fiction that see the sights of virtual reality. It describes a goggle-based virtual reality system with holographic demo of fictional experiences including aroma and feel. A very important feature of virtual reality is the environment in which it takes place and must be vigilantly engineered to achieve a realistic experience. For example, if even the least of elements in a virtual reality environment is out of place, the entire experience can be smashed. For the it to be believable, it must achieve at least some heightof **immersion**. Immersion is one of the main goals of virtual reality and when a virtual environment is created, it should be created with a view in the path of immersion. When immersion happens, the factual world can often be forgotten. Some characteristics of virtual reality are:

- A simulated environment.
- Involves in computer-generated graphics.
- 3-dimensional.
- Very interactive.
- Involves in the use of human senses.
- exists in several different forms.

II. THE ARCHITECTURE

Virtual reality's central objective is to place the participant in a virtual environment that gives the participant a feeling of "being

BLOCKCHAIN CHANGING THE WORLD

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Abstract

We are moving towards digitalization and the most common term which comes to everyone‟s mind while talking about the same is," currency". To support this, we have „Bitcoins‟, Bitcoin is a type of digital currency that can be exchanged on the Blockchain, the shared ledger technology. Bitcoins are, in essence, electricity converted into long strings of code that have money value. Bitcoin is a form of digital currency, created and held electronically. Blockchain is a shared ledger technology which is used to transfer bitcoins. It is also finding its application in various other domains such as e-voting system, government, health care etc. The security of transactions has become such a major concern these days. Theblockchain network comes with full-fledged security features and hence are being welcomed everywhere. With securityother special characteristics of blockchain have also been briefed in our work. It is known to us very well that any invention has to go through a lot of challenges; same is the case with blockchains. We have briefed some of the challenges that the implementation of blockchain technologyis facing. In this paper we have discussed the concepts of current blockchain technology, its features application andchallenges.

1. INTRODUCTION

He idea of Bitcoin was conceptualized by *Satoshi Nakamoto*, an anonymous figure. In May 2008, he shared a white paper about Bitcoin. He did not disclose who he was. He outlined how the currency would work. The first major blockchain innovation was bitcoin, a digital currency experiment. The second innovation was called blockchain, which was made keeping in mind that the technology that operated the Bitcoin should be separated from the currency and used for all kinds of other inter organizational cooperation. Almost every major financial institution in the world is doing blockchain research at the moment, and 15% of banks are expected to be using blockchain in 2017. The third innovation was called the "smart contract," embodied in a second-generation blockchain system called ethereum, which built little computer programs directly into blockchain that allowed financial instruments, like loans or bonds, to be represented, rather than only the cash-like tokens of the bitcoin. The fourth major innovation, the current cutting edge of blockchain thinking, is called "proof of stake." Current generation blockchains are secured by "proof of work," in which the group with the largest total computing power makes the decisions. These groups are called "miners" and operate vast data centers to provide this security, in exchange for crypto currency payments. The new systems do away with these data centers, replacing them with complex financial instruments, for a similar or even higher degree of security. The fifth major innovation on the horizon is called blockchain scaling. A scaled blockchain accelerates the process, without sacrificing security, by finding out how many computers are necessary to validate each transactionand dividing up the work efficiently. To manage this without compromising the legendary security and robustness of

ARTIFICIAL INTELLIGENCE MARKETING CHATBOTS

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ABSTRACT

Artificial Intelligence (AI) has revolutionized the way businesses approach marketing and customer service. One of the most popular AI applications in marketing is the use of chatbots. Chatbots are computer programs designed to simulate human conversation and provide automated customer support. This paper aims to explore the potential of AI-powered chatbots in the field of marketing and how they can benefit businesses in terms of cost-effectiveness, scalability, and customer satisfaction.

Keywords—chatbot, chatbots, artificial intelligence, marketing, big data.

INTRODUCTION

Artificial intelligence with the advancement of technology and the resulting expansion of technological capabilities, artificial intelligence is receiving more and more attention from both the academic the general public and the scientific community. A rising number of initiatives try to integrate AI into business processes and maybe gain from the aforementioned deployment.

According to the author of this essay, the resale of a good or service is the purpose of marketing. Continuous sales, or happy customers that return to make additional purchases after receiving value from their first purchase of a good or service. Opportunities grow when artificial intelligence enters the marketing sector. Using a device that can monitor and record observed behaviour from customers and look for patterns, Personalization of goods and services will be conceivable, providing marketers with a wide range of new opportunities.

In the part that follows, with an emphasis on chatbots and the results of a survey, artificial intelligence's potential and function in marketing will be discussed. It investigated respondents' behaviour, routines, and expectations when utilising various communication channels, as well as the benefits and drawbacks of chatbots in comparison to conventional channels of communication.

I. ARTIFICIAL INTELLIGENCE MARKETING

There are numerous specialised explanations of what artificial intelligence is. Demis Hasibis, co-founder and CEO of Google DeepMind, is largely regarded as He describes artificial intelligence as "the science of building smart robots," which is widely recognised. In this context, the

ALGORITHM FOR ARTIFICIAL INTELLIGENCE AND ITS APPLICATION IN GAMES

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ABSTRACT

Artificial intelligence (AI) in games has become the technical backbone for enhancing a game's playability and the overall experience of playing it. The primary selling point of game promotion, expanding the range of the gaming experience. Artificial intelligence, physics, and aesthetics are all combined in modern computer games to create a realistic gaming experience. Realistic game experiences are difficult to quantify, but generally speaking, they allude to the immersion of the game and the sophistication of the non-player characters. Game artificial intelligence, which is at the technical heart of enhancing game playability and the selling feature of many commercial games, allows players a method to engage with non-player characters in the game and elevates the realm of the gaming experience.

Keywords—Artificial intelligence, Game experience, Machine learning

INTRODUCTION

With the quick development of every type of computer game machine, particularly the growth of the videotape game business. The game machine employed by game inventors is continuously upgraded due to the tremendous advancement in computer tackle position. Every time, game plates technology is bettered as the foundation for game creation. A game's quality is heavily told by its plates machine. still, as plates technology improves, people are less happy with the stunning audio-visual experience and are rather seeking out games with deeper meaning. ultramodern videotape games incorporate plates, drugs, and artificial intelligence (AI) to give a realistic gaming experience. Indeed, though the meaning of the expression" realistic game experience" is delicate to switch down, it generally refers to the position of absorption and character intelligence that a game offers a player. In addition to magnific visual goods and pleasurable audio, a successful game that's well- liked on the request demands to include a largely realistic artificial intelligence control system. In order to give players with a genuine experience, game directors will use AI in computer or press games to make the maturity of players believe that the computer-controlled AI system they're up against has mortal intellect. Game contrivers must come up with new ideas that further alienate their own creations. Game invention and disaffection are made possible since game AI has not advanced as much as plates technology and physical simulation technology. A game is unique since inadequate use of plates and physical characteristic simulation technology has been made. A focus of gaming exploration

Driver Drowsiness Detection

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Abstract –

Machine learning techniques have been used in order to predict the condition and emotion of a driver to provide information that will improve safety on the road. It is an application of artificial intelligence. Artificial Intelligence is a method by which systems can automatically learn as well as improve without being explicitly programmed. A driver's condition can be estimated by bio-indicators, behavior while driving as well as the expressions on the face of a driver. In this paper we present an all-inclusive survey of recent works related to driver drowsiness detection and alert system. We also present the various machine learning techniques such as PERCLOS algorithm, HAAR based cascade classifier, OpenCV which are used in order to determine the driver's condition. Finally, we identify the challenges faced by the current systems and present the corresponding research opportunities.

Keywords - Artificial Intelligence, Autonomous Vehicle Technology, Drowsiness Detection, Machine Learning.

INTRODUCTION -

Sleep deprived driving is the operation of a motor vehicle while being psychologically weakened due to a lack of sleep. Sleep deprived driving is a major cause of vehicular accidents. When a person does not get the required amount of sleep, their ability to properly function is affected. When their ability to function is affected, they have longer reaction time and their memory and judgement is weakened. Many studies have found that sleep deficiency can affect driving as much as alcohol inebriation. About 20% of the people have admitted to falling asleep at the wheel with 40% of the people confessing that this has taken place at least once in their driving careers. Research shows, in India, 40% of highway crashes or near crashes occur due to drowsy driving whereas more than 50% of all deadly highway crashes which involve more than two cars are alcohol related. More than 65% of all deadly single car crashes are related to inebriation. Looking at these statistics, it is imperative that we develop a driver safety system. In order to develop such a system, we need to estimate the condition of the driver at wheel. The following is a concise description of the papers surveyed.

The following is a concise description of the papers surveyed. The paper presents an arithmetic based method to solve the problem related to the detection of drowsiness. Three stages were involved. They are Face detection, Eye position detection and Eye tracking. This paper provides an efficient method for the detection of the state of the driver [2]. This framework uses the motion of the eyes to detect the state of the driver and gives an alert within 0.5 seconds. The performance of the driver is transcribed in the form of a graph [6]. A new method for fatigue detection is presented. YCbCr colour space and canny edge detection methods are used. These methods are used to determine if the driver is under fatigue. When the driver is drowsy, an alarm system is turned on [9]. A distinct system which focuses on the concept of computer vision is designed. A software algorithm is developed. This algorithm is partially tested and is found to be working effectively. Research is in progress in order to develop a full-blown system [4]. The developed system is capable in identifying the state of drowsiness quickly. The system is capable of differentiating between normal eye blink and the eye blink associated with drowsiness. It is capable of performing under low light conditions and when the driver is wearing spectacles. This can further be developed by adding different sensors [5]. The developed system is based on computer vision. The system utilizes Viola Jones algorithm as well as the CAMSHIFT algorithm [8]. This paper is concerned with the development of a software framework for the timely and precise detection of drowsiness. Multiple facial features were considered as inputs [3]. The paper proposes a method for detecting the drowsy state based on the time-series analysis of the angular velocity of the steering wheel. When compared with the traditional method, this method provides

HAND GESTURE RECOGNITION SYSTEM

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Abstract :-

Hand gesture is one of the methods used in sign language for non-verbal communication. It is most commonly used by deaf & dumb people who have hearing or speech problems to communicate among themselves or with normal people. Various sign language systems had been developed by many makers around the world but they are neither flexible nor cost-effective for the end users. Hence, it is a software which presents a system prototype that is able to automatically recognize sign language to help deaf and dumb people to communicate more effectively with each other or normal people. Dumb people are usually deprived of normal communication with other people in the society, also normal people find it difficult to understand and communicate with them. These people have to rely on an interpreter or on some sort of visual communication. An interpreter won't be always available and visual communication is mostly difficult to understand. Sign Language is the primary means of communication in the deaf and dumb community. As a normal person is unaware of the grammar or meaning of various gestures that are part of a sign language.

Keywords **:- :** Hand gesture, Sign language,Python, Pycham,Media Pipe,Communication ,OpenCV, ANN, CNN**.**

INTRODUCTION:-

Sign language is the mode of communication which uses visual ways like expressions, hand gestures, and body movements to convey meaning. Sign language is extremely helpful for people who face difficulty with hearing or speaking. Sign language recognition refers to the conversion of these gestures into words or alphabets of existing formally spoken languages. Thus, conversion of sign language into words by an algorithm or a model can help bridge the gap between people with hearing or speaking impairment and the rest of the world.

Vision-based hand gesture recognition is an area of active current research in computer vision and machine learning. Being a natural way of human interaction, it is an area where many researchers are working on, with the goal of making human computer interaction (HCI) easier and natural, without the need for any extra devices. So, the primary goal of gesture recognition research is to create systems, which can identify specific human gestures and use them, for example, to convey information. For that, vision-based hand gesture interfaces require fast and extremely robust hand detection, and gesture recognition in real time. Hand gestures are a powerful human communication modality with lots of potential applications and in this context, we have sign language recognition, the communication method of deaf people.

Hand gesture recognition for human computer interaction is an area of active research in computer vision and machine learning. One of its primary goals is to create systems, which can identify specific gestures and use them to convey information or to control a device. Though, gestures need to be modelled in the spatial and temporal domains, where a hand posture is the static structure of the hand and a gesture is the dynamic movement of the hand. There are basically two types of approaches for hand gesture recognition: vision-based approaches and data glove approaches. This work main focus is on creating a vision-based system able to do real-time sign language recognition. The reason for choosing a system based on vision relates to the fact that it provides a simpler and more intuitive way of communication between a human and a computer. Being hand-pose one of the most important communication tools in human's daily life, and with the continuous advances of image and video processing techniques, research on human-machine interaction through gesture recognition led to the use of such technology in a very broad range of applications, like touch screens, video game consoles, virtual reality, medical applications, and sign language recognition. Although sign language is the most natural way of exchanging information among deaf people it has been observed that they are facing difficulties with normal people interaction. Sign language consists of vocabulary of signs in exactly the same way as spoken language consists of a vocabulary of words.

RESEARCH PAPER: A SURVEY ON DATA SCIENCE

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ABSTRACT:

Data Science is a rapidly growing field that combines computer science, statistics, and domain expertise to extract meaningful insights from large and complex datasets. The goal of data science is to turn data into actionable information that can support decision-making in various industries, such as healthcare, finance, retail, and sports. In this research paper, we will provide a comprehensive overview of the field of data science, including its history, methods, applications, and challenges. We will also discuss the latest trends and advancements in the field, and their potential impact on the future of data science. Our aim is to provide a thorough understanding of the field of data science, its significance, and its future potential. This research paper will be of interest to professionals and students who are interested in learning more about the field of data science, as well as its applications and challenges.

INTRODUCTION

Data Science is a rapidly evolving field that has emerged as one of the most important drivers of innovation and growth in the 21st century. The field of data science has its roots in computer science, statistics, and domain expertise, and it combines these disciplines to extract meaningful insights from large and complex datasets. The goal of data science is to turn data into actionable information that can support decision-making in various industries, such as healthcare, finance, retail, and sports.

The proliferation of digital devices and the growth of the internet have led to an exponential increase in the amount of data that is being generated. This explosion of data, often referred to as "big data," has created new opportunities for organizations to gain valuable insights into their operations, customers, and markets. However, big data also presents significant challenges, including the need for advanced computational methods, algorithms, and tools to manage and analyze the data.

The field of data science has emerged in response to these challenges, and it has become a critical component of modern organizations that are seeking to turn data into actionable insights. Data science professionals use a combination of computational methods, statistical models, and domain expertise to uncover patterns and relationships in data, and to generate predictions and recommendations based on the data.

In this research paper, we will provide a comprehensive overview of the field of data science, including its history, methods, applications, and challenges. We will also discuss the latest trends and advancements in the field, and their potential impact on the future of data science. Our aim is to provide a thorough understanding of the field of data science, its significance, and its future potential. This research paper will be of interest to professionals and students who are interested in learning more about the field of data science, as well as its applications and challenges.

Future job advertisements for data scientists will be quite popular. With that in mind, get ready to adjust yourself to this society.

RESEARCH PAPER: HEALTHCARE CHATBOTS

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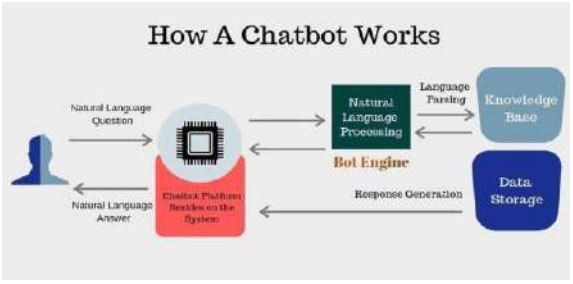
ABSTRACT

Healthcare is very important to lead a good life. However, it is very difficult to obtain the consultation with the doctor for every health problem. The idea is to create a medical chatbot using Artificial Intelligence that can help a user to diagnose the disease and provide basic details about the disease before consulting a doctor. This will help to reduce healthcare costs and improve accessibility to medical knowledge through medical chatbot. The chatbots are computer programs that use natural language to interact with users. while humans as a whole do live longer nowadays than ever before, we now suffer certain illnesses to a degree never seen in the past - including rising rates of Diabetes, Hypertension, Hypotension, Cholesterol imbalance, obesity and, ailments such as fever. People around the world are preemptively seeking medical advices on how to live a healthy lifestyle. They are looking to lower their risk of various diseases. A healthcare chatbot can play a significant role to monitor a person's health status. A healthcare chatbot is a computer program designed to simulate conversation with human users as a virtual medical assistant. Chatbots running on the power of artificial intelligence are quickly making their presence felt in the field of healthcare industries.

INTRODUCTION

Through chatbot one can communicate with text or voice interface and get reply through artificial intelligence. Typically, a chat bot will communicate with a real person. Chat bots are used in applications such as ecommerce customer service, call center and Internet gaming. Chatbot are programs built to automatically engage with received messages. Chatbot can be programmed to respond the same way each time, to respond differently to messages containing certain keywords and even to use machine learning to adapt their responses to fit the situation. A developing number of hospitals, nursing homes, and even private center, presently utilize online Chatbot for human services on their sites. These bots connect with potential patients visiting the site, helping them discover specialists, booking their appointments, and getting them access to the correct treatment. In any case, the utilization of artificial intelligence in an industry where individuals' lives could be in question still starts misgivings in individuals. It brings up issues about whether the task mentioned above ought to be assigned to human staff. This healthcare chatbot system will help hospitals to provide healthcare support online 24 x 7, it answers deep as well as general questions. It also helps to generate leads and automatically delivers the information of leads to sales. By asking the questions in series it helps patients by guiding what exactly he/she is looking for.



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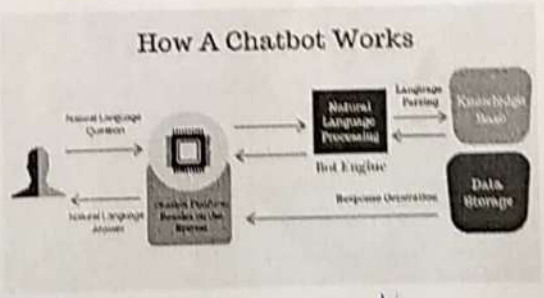

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