K.S.RANGASAMY
COLLEGE OF TECHNOLOGY
(Autonomous) | Tiruchengode

A++ GRADE

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DEPARTMENT MAGAZINE

TECH GURU '23

DEPARTMENT OF INFORMATION TECHNOLOGY

UTSAHA'23

aKshaa T23
Being adroit...

WITH THE BLESSING OF

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K.S.RANGASAMY COLLEGE OF TECHNOLOGY, TIRUCHENGODE - 637 215
(AUTONOMOUS)
DEPARTMENT OF INFORMATION TECHNOLOGY

VISION:

To emerge as an Information Technology knowledge hub by imparting quality education, promoting research and innovation.

MISSION:

• To provide holistic education through curriculum update, inspired and experiential learning

• To mould the students as responsible professionals to compete with the emerging global challenges

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs):

PEO1: Core Competence: Graduates will have core competence in engineering fundamentals and computing to solve hardware and software engineering problems

PEO2: Successful Career: Graduates will demonstrate successful professional practices in industry, academia and e-governance.

PEO3: Ethics and life-long learning: Graduates will continue to advance in their career through life-long learning with a social and ethical concern

PROGRAMME SPECIFIC OUTCOMES (PSOs):

Engineering graduates will be able to:

PSO1: Develop IT infrastructure: Develop suitable IT infrastructure in diverse domains through acquired foundation skills and knowledge.

PSO2: Design / Develop software products: Apply necessary tools and methodologies to design and develop software products .

PSO3: Innovative Career: Create a zest for innovative career path through value-based software courses and entrepreneurial skills resulting in competent IT solution providers

.

PROGRAM OUTCOMES

Engineering Graduates will be able to:

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

CONTENTS

BLOCKCHAIN

The blockchain concept was first put up as a research project in 1991, long before Bitcoin, which was introduced in 2009. Through the development of numerous cryptocurrencies, DeFi applications, non-fungible tokens (NFTs), and smart contracts during the ensuing years, the use of blockchains has multiplied.

A blockchain is a shared distributed database or ledger between computer network nodes. A blockchain serves as an electronic database for storing data in digital form. The most well-known use of blockchain technology is for preserving a secure and decentralised record of transactions in cryptocurrency systems like Bitcoin. The innovation of a blockchain is that it fosters confidence without the necessity for a reliable third party by ensuring the fidelity and security of a record of data.

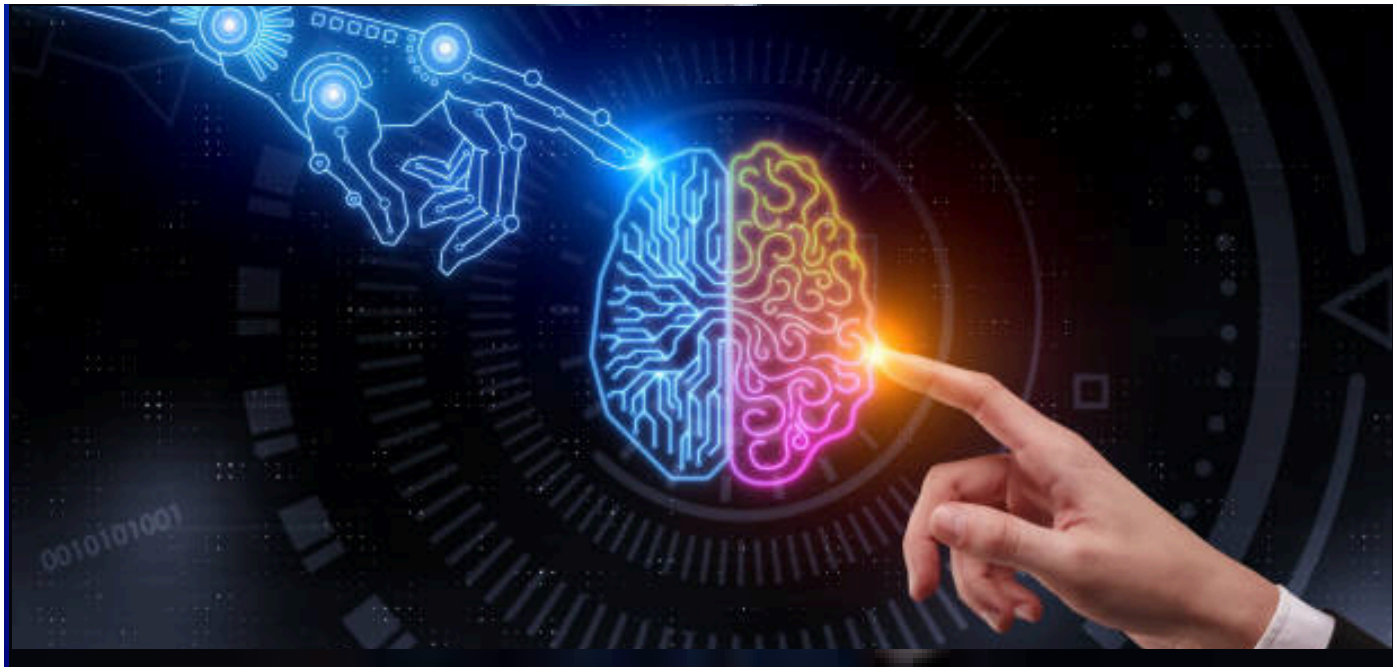
Due to the decentralised structure of the Bitcoin blockchain, all transactions may be transparently observed by utilising blockchain explorers, which enable anybody to examine transactions as they happen in real time, or by owning a personal node. As new blocks are added and confirmed, each node's copy of the chain is updated. This implies that you might follow Bitcoin wherever it went if you so desired.

A public blockchain is a blockchain that anyone can participate in. Bitcoin for example. Disadvantages include significant processing power requirements, little or no transaction privacy, and weak security. These are important considerations for blockchain enterprise use cases.

Companies that set up private blockchains typically set up permissioned blockchain networks. It's important to note that public blockchain networks may also be allowed.

Aakash K
III A

AI/ML



AI is computer software that mimics human thinking to perform complex tasks such as analysis, reasoning, and learning. Machine learning, on the other hand, is a subset of AI that uses algorithms trained on data to create models that can perform such complex tasks. The two terms are often used interchangeably because most AI today is done using machine learning, but in reality AI uses computer software and systems to create human-like perceptions. It refers to the general concept of doing, and ML is just one way to do it.

AI/ML - Short for artificial intelligence (AI) and machine learning (ML), it represents a major development in computing and data processing that is rapidly transforming a variety of industries.As businesses and other organizations undergo digital transformation, vast amounts of data are generated in abundance.

Artificial intelligence generally refers to processes and algorithms that can simulate human intelligence, including mimicking cognitive functions such as perception, learning, and problem-solving. Machine learning and deep learning (DL) are subfields of AI.
Your paragraph textMachine learning is a subset of AI that falls into the "limited memory" category that allows AI (machines) to learn and evolve over time.

DEEP LEARNING:
Deep learning (DL) is a subset of machine learning that attempts to emulate human neural networks, eliminating the need for preprocessed data. Deep learning algorithms cn ingest, process, analyze, and learn from large amounts of unstructured data without human intervention.

Anupriya S
III A

CYBER SECURITY

One emerging theory in the field of cybersecurity is known as the "Cybersecurity Ecosystem Theory." This theory posits that the cybersecurity landscape is not a collection of isolated systems and networks, but rather a complex and interconnected ecosystem that must be understood as a whole.

The Cybersecurity Ecosystem Theory recognizes that every aspect of modern society is now connected to the internet, creating a vast web of interconnected devices, networks, and data flows. This interconnectedness means that any cyber threat can quickly spread and affect multiple systems, leading to potentially catastrophic consequences.

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Potecting computer systems, networks, and sensitive data from unwanted access, theft, and damage is known as cybersecurity.

It is an important facet of our contemporary environment, where technology has ingrained itself into every element of our existence. Cybersecurity features comprise a range of precautions used to protect our digital assets from cyberattacks, such as firewalls, antivirus software, encryption, and security procedures.

A powerful firewall is one of the most important aspects of cybersecurity. A firewall is a type of network security system that keeps track of and regulates both incoming and outgoing network traffic in accordance with pre-established security rules.

Bala Suruthika A G
III A

METAVERSE

Cibi M M
III A

"Metaverse" became a household word when Facebook announced plans to rebrand its corporate identity to Meta in October 2021 and invest at least $10 billion in the concept this year. In addition to Meta, tech giants such as Google, Microsoft, Nvidia and Qualcomm are also investing billions in the concept. Management consultancy McKinsey & Company optimistically predicts that the size of the Metaverse economy could reach $5 trillion by 2030. With e-commerce expected to be the dominant engine, gaming, entertainment, education and marketing are also becoming important areas of the Metaverse.

Businesses today use the term to refer to various types of enhanced online environments. These range from online video games like Fortnite, to new virtual workspaces like Microsoft's Mesh and Meta's Horizon Workrooms, to virtual dressing rooms and virtual operating rooms.

The current version of the Metaverse has evolved into a multiverse rather than a single shared virtual space. That is, a large number of metaverses with limited interoperability as companies vie for position.

Uncritical enthusiasm for the Metaverse, combined with deep uncertainty about how it will turn out, has caused some backlash. Industry observers wonder whether the Metaverse will end up being much different than today's digital experience, or if so, how many hours a day the masses spend in headsets navigating the digital space. I am wondering if you are willing to.Other futurists, however, argue that the Metaverse is still in its infancy and will come to fruition while fundamental technological barriers still exist. And it will come with a big bang.

A metaverse for collaboration at work. Forrester analyst J.P. Gowner. This includes setting up his 3D space where employees can collaborate.

EDGE COMPUTING

Edge computing is a distributed computing paradigm that brings computation and data storage closer to the sources of data. This is expected to improve response times and save bandwidth. Edge computing is an architecture rather than a specific technology, and a topology- and location-sensitive form of distributed computing.

Internet of things (IoT) is an example of edge computing. A common misconception is that edge and IoT are synonymous .Business Analytics may be defined as refining past or present business data using modern technologies. un a wide range of applications on edge servers. They are used to build sophisticated models for driving future growth. A general Business Analytics process may include Data Collection, Data Mining, Sequence Identification, Text Mining, Forecasting, Predictive Analytics, Optimization, and Data Visualization.

The State of the Edge report, edge computing concentrates on servers "in proximity to the last mile network". [citation needed] Alex Reznik, Chair of the ETSI MEC ISG standards committee, loosely defines the term by essentially suggesting that anything that's not a traditional data centre could be the 'edge' for somebody.

Edge nodes used for game streaming are known as gamelets, which are usually one or two hops away from the client. Per Anand and Edwin say "the edge node is mostly one or two hops away from the mobile client to meet the response time constraints for real-time games' in the cloud gaming context. "Edge computing may employ virtualization technology to make it easier to deploy and run a wide range of applications on edge servers

Dharun M
III A

5'TH GENERATION(5G)

Gokul C
II A

The fifth generation of wireless technology—5G—represents the changing face of connectivity. Designed for maximum speed and capacity, 5G has the potential to vastly expand how data is moved and will enable a wide range of new applications and use cases that go far beyond the smartphone.

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5G's promise of low latency and high network capacity helps to eliminate the biggest limitations to IoT expansion. Giving devices nearly real-time ability to sense and respond, 5G and IoT are a natural pairing that will impact nearly every industry and consumer.

Wireless networks are composed of cell sites divided into sectors that send data through radio waves. Fourth-generation (4G) Long-Term Evolution (LTE) wireless technology provides the foundation for 5G. Unlike 4G, which requires large, high-power cell towers to radiate signals over longer distances, 5G wireless signals are transmitted through large numbers of small cell stations located in places like light poles or building roofs. The use of multiple small cells is necessary because the millimeter wave (mmWave) spectrum-- the band of spectrum between 30 and 300 gigahertz (Ghz) that 5G relies on to generate high speeds.

HYPERAUTOMATION

Harini P
III A

Hyperautomation is the concept of automating everything in an organization that can be automated. Organizations that adopt hyperautomation aim to streamline processes across their business using artificial intelligence (AI), robotic process automation (RPA), and other technologies to run without human intervention It is also important to note that the role that the pandemic has played in the adoption and acceleration of hyperautomation within the market, fueling the prioritization of digital transformation and automation initiatives over the last year. With the business ecosystem operating in a distributed manner, hyperautomation eases the burden that repetitive processes and legacy infrastructure incur on an organization and its resources. The transformation that hyperautomation affords an organization enables it to operate in a more streamlined manner, often resulting in reduced costs and a stronger competitive position.

Legacy infrastructure and processes can slow an organization down and affect their ability to be competitive. Simple, task-based automation does not deliver the cross-functional results that will drive business decision making and results. Hyperautomation transforms an organization by automating as many processes and tasks as possible.Hyperautomation transforms businesses by streamlining business processes by eliminating repetitive tasks and automating manual ones. This has a number of key benefits. It allows organizations to complete tasks with consistency, accuracy, and speed. This, in turn, reduces costs, and generally improves the customer experience.
.

ROBOTIC PROCESS AUTOMATION(RPA)

Robotic process automation (RPA) is a type of business process automation technology based on artificial intelligence (AI)/digital workers or on metaphorical software robots (bots). Sometimes people refer to it as software robotics (not to be confused with robot software).

Using internal application programming interfaces (APIs) or specialised scripting languages, a software developer creates a list of actions to automate a task and interface with the back end system in traditional workflow automation tools. RPA systems, on the other hand, create the action list by observing the user carry out the task in the graphical user interface (GUI) of the application, and then carry out the automation by repeating those actions directly in the GUI.

Robotic automation typically has cost-saving, improved quality, scalability of production, speed, accuracy, and consistency advantages. Additional security can be provided by automation, particularly for financial services and sensitive data.

The majority of operations groups using RPA have assured their staff that automation will not lead to layoffs, according to Harvard Business Review. Instead, employees have been reassigned to more engaging tasks. One academic study showed that knowledge workers welcomed automation and saw the robots as teammates rather than feeling threatened by it. The same study showed that rather than lowering "headcount," technology was used in a way that increased productivity and output while using the same number of workers.

Monisha T K
III A

DATA SCIENCE

Nivetha R
III B

Data science combines math and statistics, specialised programming, advanced analytics, artificial intelligence (AI), machine learning, and specific subject matter expertise with domain expertise to uncover useful insights hidden in the data of an organisation. Decision-making and strategic planning can be influenced by these insights.

Data science is one of the fields with the fastest rate of growth across all industries due to the increasing volume of data sources and resulting data. The title of "sexiest job of the 21st century" given to the position of data scientist by Harvard Business Review is thus not surprising (link resides outside of IBM). They are increasingly relied upon by organisations to interpret data and offer practical suggestions for enhancing business outcomes.Data science is an interdisciplinary field that is focused on extracting knowledge from frequently large data sets .

In a wide range of application domains, the field includes the preparation of data for analysis, formulation of data science problems, analysis of data, development of data-driven solutions, and presentation of findings to guide high-level decisions. As a result, it combines knowledge and abilities from a variety of fields, including computer science, statistics, information science, mathematics, data visualisation, information visualisation, data sonification, data integration, graphic design, complex systems, communication, and business. Data science and human-computer interaction are related, according to statistician Nathan Yau, who references Ben Fry. Users should be able to control and explore data in an intuitive manner. The American Statistical Association recognised database administration.

BUSINESS ANALYTICS

Pavin R G
III B

Business Analytics may be defined as refining past or present business data using modern technologies. They are used to build sophisticated models for driving future growth. A general Business Analytics process may include Data Collection, Data Mining, Sequence Identification, Text Mining, Forecasting, Predictive Analytics, Optimization, and Data Visualization.

Every business today produces a considerable amount of data in a specific way. Business Analytics now are leveraging the benefits of statistical methods and technologies to analyze their past data. This is used to uncover new insights to help them make a strategic decision for the future.Business Intelligence, a subset of the Business Analytics field, plays an essential role in utilizing various tools and techniques such as machine learning and artificial intelligence technologies to predict and implement insights into daily operations.

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QUANTUM COMPUTING

Preethi R
II B

Quantum computing is a cutting-edge technology that utilizes the principles of quantum mechanics to process and analyze data. Unlike classical computers, which operate on bits that can only represent two states (0 or 1), quantum computers use quantum bits, or qubits, that can represent multiple states simultaneously, enabling them to solve complex problems that would take classical computers years or even decades to solve. While still in its infancy, quantum computing has the potential to revolutionize fields such as cryptography, chemistry, and artificial intelligence, ushering in a new era of computing power and capabilities.

The development of quantum computing is a complex and challenging endeavor, requiring significant resources and expertise in fields such as physics, engineering, and computer science.

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VIRTUAL AND AUGUMENTED REALITY

Almost any person with a smartphone can get access to augmented reality, making it more efficient than VR as a branding and gaming tool. AR morphs the mundane, physical world into a colorful, visual one by projecting virtual pictures and characters through a phone's camera or video viewer. Augmented reality is merely adding to the user's real-life experience.

Virtual reality takes these same components to another level by producing an entirely computer-generated simulation of an alternate world. These immersive simulations can create almost any visual or place imaginable for the player using special equipment such as computers, sensors, headsets, and gloves.AR shows different content in the real world, which is one way that it differs from VR.

Virtual reality allows you to immerse yourself in a virtual world using a headset with a kind of screen that displays the virtual environment. These headsets also use a technology called head tracking, which allows you to look around by physically moving your head. The display follows you in all directions you move, giving you his 360-degree view of your virtual environment.VR creates an immersive virtual environment, while AR augments the real scene. VR is 75% virtual, while AR is only 25% virtual. VR requires a headset device, AR does not. VR users move through a completely fictional world, while AR users come into contact with the real world.

Rithika C
III A

FACTS

Every iPhone advertisement has the time set to 9:41.
Every advertisement for an Apple iPhone, the time will be set as 9:41.
This is the time that Steve Jobs announced the very first iPhone in 2007.

Deepak D
II A

The first alarm clock could only ring at one time.
Literally, one time! The first mechanical alarm clock could only ring at 4 a.m. invented by Levi Hutchins in 1787.It wasn't until 1876 that a wind-up alarm clock was made that could be set for any time.

Janani M
II A

.The government used PlayStation 3's... but not for gaming.
The Government used PlayStation 3's.In 2010, the United States Air Force used 1,760 PlayStation 3 consoles to build a supercomputer for the Department of Defense.They used PS3s because it was more cost-efficient and "green."

Kavin R
II A

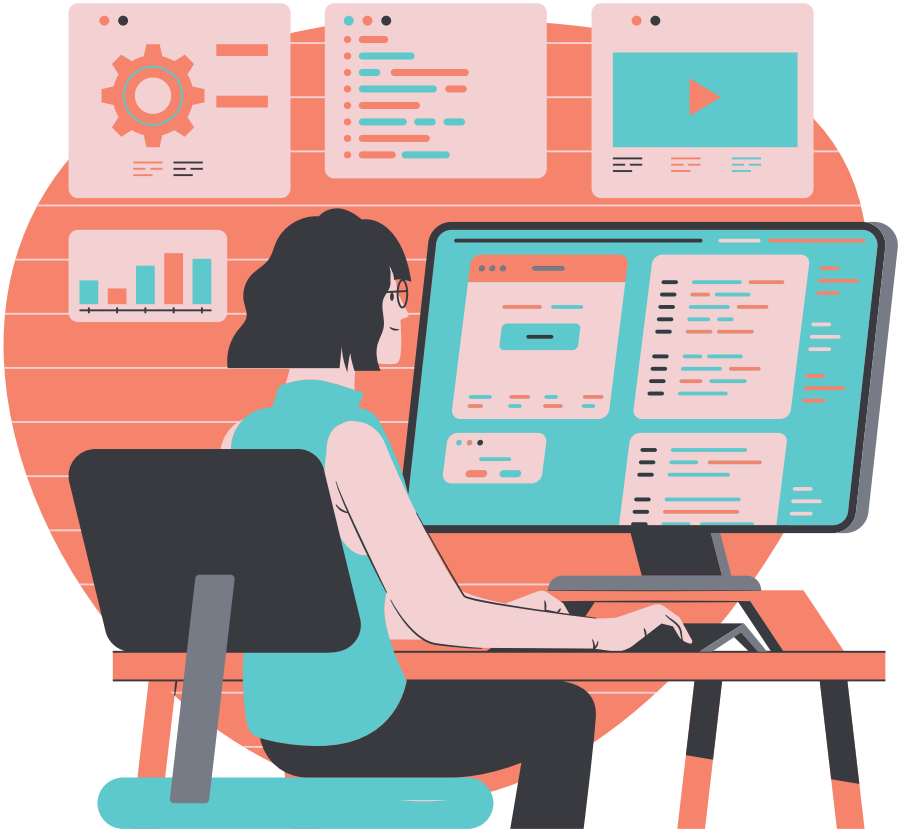
There are Amish computers.
There are computers specially designed without internet, video, or music capabilities, just for the Amish. The features include word processing, drawing, accounting, spreadsheets, and more – but not much more.

Mythili G
II A

The Pulse of Technology

Tech evolves at lightning speed,
Fueling dreams with code and need.
AI learns and robots grow,
Changing how our systems flow.
Clouds now store what once was lost,
Data rules, but at a cost.
Cyber threats are creeping near,
Guard your world, stay sharp and clear.

Arul G
I A



PROGRAMMING QUESTIONS

1) Swapping of two numbers without using temporary variable

```
#include<stdio.h>
 int main()
{
int a=10, b=20;
printf("Before swap a=%d b=%d",a,b);
a=a+b;
b=a-b;
a=a-b;
printf("\nAfter swap a=%d b=%d",a,b);
return 0;
}
```

Pooja R
II B

2) Program to find weather the given number is odd or even without using mod operator

```
#include<stdio.h>
int main()
{
   int a,b;
   scanf("%d",&a);
   while(a!=0)
   {
      a=a-2;
      if(a==1)
      break;
   }
   if(a==0)
   {
      printf("even");
   }
   else
   {
      printf("odd");
   }
}
```

Reena K
III B

3)Program to find weather the given number is divisible by 7 or not without using mod operator

```
#include<stdio.h>
int main()
{
    int a;
    scanf("%d",&a);
    while(a!=0)
    {
        a=a-7; if(a==1||a==2||a==3||a==4||a==5||a==6)
        break;
    }
    if(a==0)
    {
        printf("divisible by 7");
    }
    else
    {
        printf("not divisible by 7");
    }}
```

Sanjay S
II B

4)Program to find which number is greator without using Logical operator

```
#include<stdio.h>
int main()
{
    int a,b,back,c,d;
    scanf("%d %d",&a,&b);
     c=a;
    d=b;
    back:
    a=a-1;
    b=b-1;
    if(a==0)
    {
    printf("b is greater:b=%d",d);
    }
    else if(b==0)
    {
        printf("a is greater:a=%d",c);
    }
    else
    {
        goto back;}}
```

Subasri A
II B

QUIRKY NUGGETS

TOP MOST RECOMMENDED APPS

1) MEDIUM APP

Sowmiya S
II B

In today's fast-paced digital age, the Medium app emerges as more than just a platform for sharing ideas and information. It embodies a unique theory centered around the creation of empathetic knowledge ecosystems.

Within these ecosystems, writers, thinkers, and readers coexist harmoniously, promoting the exchange of ideas that transcend societal barriers. The app empowers individuals to share their stories, insights, and experiences openly, embracing vulnerability and inviting others to empathetically listen and learn.

2)FOREST

Subramani V
II B

Forest creates a virtual forest where users nurture trees by staying focused and resisting digital distractions.IIt revolutionizes the way we interact with technology, offering a transformative experience that nurtures focus, mindfulness, productivity, and environmental consciousness. By embracing it, users embark on a journey towards personal growth while contributing to a greener world.

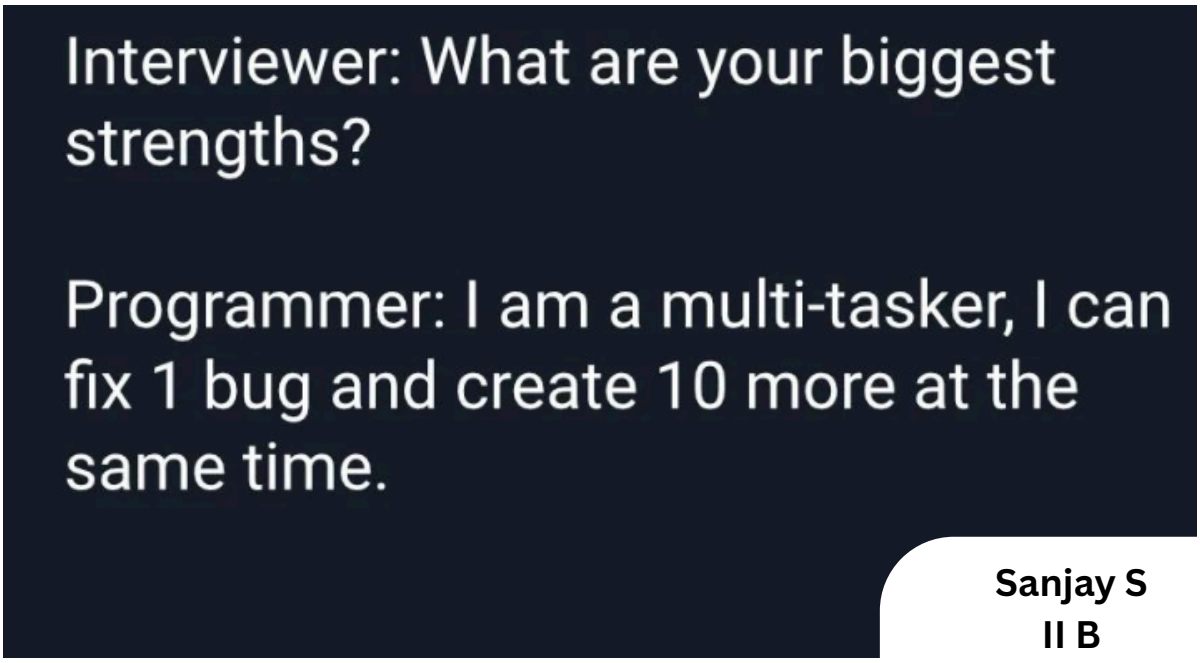
3)POCKET

Vignesh U
II B

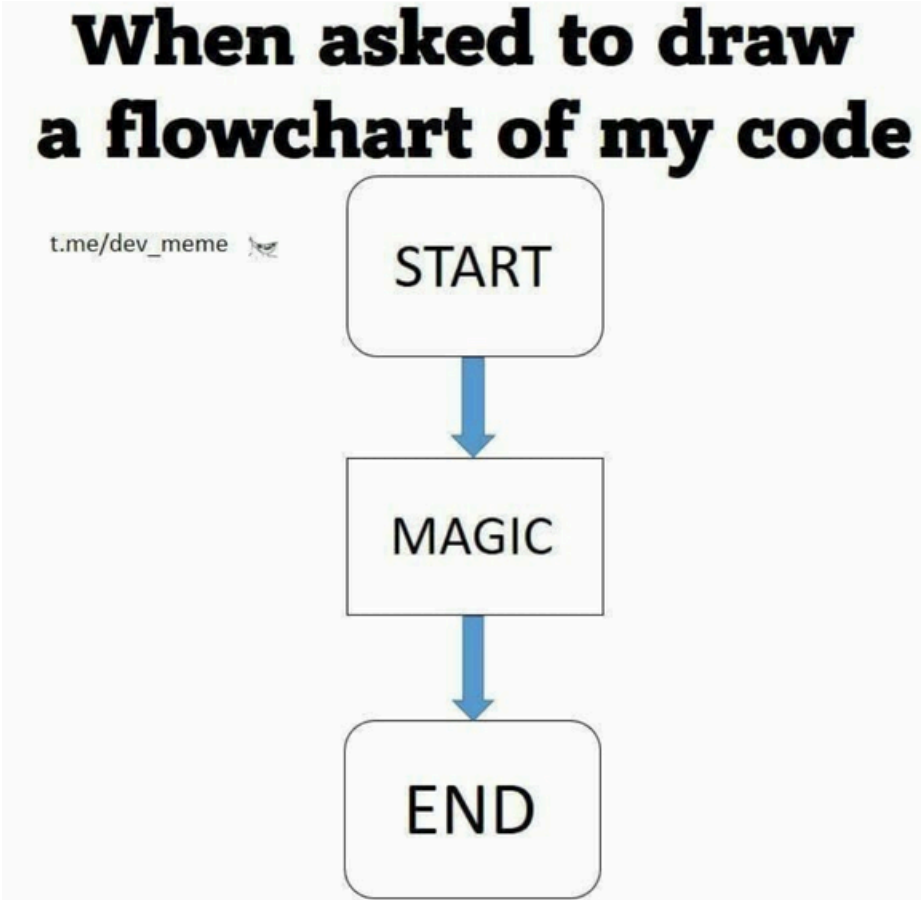
Pocket, a remarkable app that empowers you to create, save, and discover the digital realm like never before. With Pocket, you can effortlessly capture and organize articles, web pages, and videos, creating your personal digital library for convenient access anytime, anywhere.

unlocking a world of knowledge and
inspiration right at your fingertips

MEMES



Sanjay S
II B



Sibi V
III B

GeeksforGeeks
@geeksforgeeks

I don't know whether I'm testing the program
.
.
.
.
.
Or is it testing me? 🥲

Sriman A
III B

Lingesh L
II A

ACTIVITY

CONNECT THE DOTS IN THIS PICTURE AND BUILT YOUR OWN STORY

Balasastha E
I A

INNOVATIVE PROJECTS

SMART LIVESTOCK MANAGEMENT FOR FARMERS USING DIGITAL TECHNOLOGY

There is a lack of awareness among people on how to take care of their animals and how to prevent animalsfrom getting affected. Due to thislack ofour awareness many animals died because of unpredictable diseases. This proposed system provide precautions and prevention methods to take care of their animals in a safer and healthier way. The main objective is to give healthcare tips to people so that user can easily take care of their animals. In the healthcare tips the information provided to improve health management and maintenance. By providing veterinary support to the users virtually and by providing better feeding management for domestic animals to increase their productivity and for pet animals to make them grow healthier. In addition, with that, our proposed system also support buying and sellinganimals. In the Buying and Selling customer details were provided directly to contact each other for business. In this proposed system, XML used as a Frontend and Java as a backend, Firebase used as a database, and Android studio as the developing tool. The main benefit of our proposed system more useful for people who have less knowledge of animals and it give more profit for domestic animal caretakers. It is useful in critical situations to getinformation about veterinary support and the buying and selling option can be done virtually without any brokerage.

KARTHIKEYAN S , MUTHUKUMAR S , ROOPAN RAJ P

THE COCOON OF ANTHROPOID ON TRAUMA ALLEVIATION USING VIRTUAL REALITY

In this modern era, stress has become a common problem among every individual especially teenagers. The term stress is used in physics to determine the interaction between a force and the resistance to counter that force. Later, Hans Selye who was known as the father of stress research was the first person to incorporate the term into the medical lexicon. The change in the lifestyle of the people has drastically affected their mental and physical health. Stress reduction is essential for maintaining your overall health as it boosts the immune system, improves your mood, and helps maintain your health. While everyone is into physical treatments like consulting a psychiatrist for counseling, yoga, etc., our project provides a virtual solution that would as effective as other successful remedies for Stress reduction. We have planned to implement the concept of Virtual Reality (VR) to create an imaginary world where the person wishes to stay including parks, beaches, tourist spots in different countries, games, a cartoon world, etc., This app is connected to a sensor that would calculate the stress level and notify the person when it is beyond the limit. The person will be automatically recommended to take a break from his/her work and enjoy by using our VR app with the VR glass to get rid of his/her stress by themselves.

ABARNA R , BHAVATHARANI M , DHANASRI M

FRUIT QUALITY DETECTION USING IMAGE PROCESSING

Fruit maturity and quality prediction is critical not only for farmers and the food business, but also for small retail outlets and supermarkets where fruits are sold and purchased. Fruit maturity classification is the practice of categorizing fruits based on their maturity stage in their life cycle. Machine learning (ML) is being used in many smart agricultural applications, including water and soil management, crop planting, crop disease detection, weed control, crop distribution, strong fruit counting, crop harvesting, and production forecasting. The goal of this research is to develop the best deep learning algorithms for predicting fruit ripeness and quality for fruit shelf life. Manual fruit and vegetable detection becomes simple when done in little quantities, but it is a laborious procedure when done in large quantities. As a result, automated detection of these is used. The photos of fruits, crops and pulse were used as input for the very first step of processing, where detection was performed. The entire procedure was divided into three stages: background removal, extraction of color and texture characteristics, and classification. The k mean clustering approach was used for background subtraction.

KAVIKARTHIK K, NITHISH KUMAR SR, SHANKAR KR

SMART WASTE MANAGEMENT SYSTEM: AN IOT AND CLOUD APPROACH FOR EFFECTIVE MONITORING AND MANAGEMENT

Many societal problems can be solved transparently through IoT, as well as a wide range of problems associated with heterogeneous end-systems. Our goal is to reduce plastic waste as much as possible while providing open access to select subsets of various data sets. There are many problems with our environment today, but solid waste Management is one of the biggest disrupting the balance of the environment and adversely affecting the health of society. The deduction monitoring and management of wastes is one of the primary problems of the era. As a traditional method of monitoring wastes, it is complex, cumbersome, and requires more human effort, time, and money. Our waste management corporation handles the disposal of waste. A smart waste management system based on IoT Cloud and the separation of major plastic waste from the hub will enable plastic, biodegradable and metallic waste to be segregated into separate containers connected to the panel. A model is developed with various sensors that separate waste into different phases, separating the container into three phases according to these sensors: the first phase uses ultrasonic and capacitive sensors and dryer modules to dry the wet waste; the second phase separates waste from other wastes and monitors level of waste; in phase three, waste is segregated by sensors into different bins in accordance with their characteristics and nature.

ABHINAYA GK , HARITHA H, SUBHASH SUTHAR B

A FRAMEWORK TO DETECT DIGITAL TEXT USING OCR MACHINE LEARNING

In this paper we address the problem of offline handwritten text recognition (HTR) in historical documents when few labelled samples are available and some of them contain errors in the train set. Our three main contributions are: first, we analyse how to perform transfer learning (TL) from a massive database to a smaller historical database, analysing which layers of the model need fine-tuning. Second, we analyse methods to efficiently combine TL and data augmentation (DA). Finally, we propose an algorithm to mitigate the effects of incorrect labelling in the training set. The methods are analysed over the ICFHR 2018 competition database, Washington and Parzival. Combining all these techniques, we demonstrate a remarkable reduction of CER (up to 6 percentage points in some cases) in the test set with little complexity overhead.

KAVIYARASAN R, MATHANAGOPAL V, SRIVARATHARAJ K

PHISHING WEBSITE DETECTION USING MACHINE LEARNING ALGORITHMS

The work entitled “Phishing Website Detection using Machine Learning Algorithms” is a novel method for Quos metrification based on Hidden Markov Models (HMM), which further suggests an optimal path for the execution of user requests. The technique we show can be used to measure and predict the behavior of Phishing Web Service s in terms of response time, and can thus be used to rank services quantitatively rather than just qualitatively. We demonstrate the feasibility and usefulness of our methodology by drawing experiments on real world data. The results have shown how our proposed method can help the user to automatically select the most reliable Phishing Web Service taking into account several metrics, among them, system predictability and response time variability, For Internet services, the presence of low-performance servers, high latency or overall poor service quality can translate into lost sales, user frustration and customers lost. The experimental results show’s user click-through logs from a commercial search engine to validate the effectiveness of our proposed method. Third, the distributions of user search goals can also be useful in applications such as re ranking web search results that contain different user search goals.

AJAY ARAVINDH R , BHAVAN VISHVA S , KANISHKESVAR A

ON-DEMAND JOB-BASED RECRUITMENT FOR ORGANISATIONS USING ARTIFICIAL INTELLIGENCE

Employee attrition, also referred to as the loss of personnel over time in a business, occurs for a variety of inescapable reasons. The attrition percentage in 2022 will be 20.3%, according to the latest statistics from India. Employee attrition is a significant problem that can cause severe losses to organizations. In recent years, machine learning has emerged as a powerful tool to address this challenge by predicting employees who may leave the organization. However, the accurate prediction of employee attrition faces various challenges, including dealing with imbalanced datasets, identifying the most critical predictors, and selecting the most appropriate machine learning algorithms. In this study, the proposed solution employs a combination of data pre-processing techniques and machine learning algorithms to predict employee attrition. Our solution includes a visual representation of employee attrition, a parser to extract information from resumes, a test to assess the suitability of potential candidates and AI candidate recommendation. Evaluate the proposed solution using the Employee Attrition dataset and achieve promising results.

MAHESHWARAN AK, SAURAV ARVIND P, VIJAYARAGAVAN G

BIG DATA ANALYTICS AND MINING FOR EFFECTIVE VISUALIZATION AND TRENDS FORECASTING OF CRIME DATA

Big Data Analytics (BDA) is a systematic approach for analyzing and identifying different patterns, relations and trends within a large volume of data. In this paper we apply BDA to criminal data where exploratory data analysis is conducted for visualization and trends prediction. Several state-of- the-art data mining and deep learning techniques are used. Following statistical analysis and visualization, some interesting facts and patterns are discovered from criminal data in San Francisco, Chicago and Philadelphia. The predictive results show that the Prophet model and Kera's stateful LSTM perform better than neural network models, where the optimal size of the training data is found to be three years. These promising outcomes will benefit for police departments and law enforcement organizations to better understand crime issues and provide insights that will enable them to track activities, predict the likelihood of incidents, effectively deploy resources and optimize the decision making process.

HARIKEERTHAN S , AJAY JOYSON J , ASHWIN S

ANDROID APPLICATION FOR ORGAN DONATION AND TRANSPLANTATION

This project is mainly focused to provide the services to the needy through a single application and make the donation process easy. In this donation the donor can easily reach the needy through the consent of the administrator. In the other kinds of donations, it mainly collects the donations of the donors and deliver them to the respective organizations and provide the information to the respective doctors of that organization to maintain transparency. To manage the donor registration and user maintenance. Peoplewho interested can register themselves through this system. The application aims at bridging the coordination and communication gap between patients and donors, we know that lot of patients die without access to a proper donor, be it organ or blood. A mobile application that would bridge the gap is the need of the hour, life siren is no different andit is a bit different from the existing system, our application makes use of a mobile app atboth the ends, anyone can register and turn out to be a user

MANOJKUMAR S, NITHYA K, NIVETHA B

MACHINE LEARNING ALGORITHMS FOR BREAST CANCER PREDICTION

Breast cancer is classified into numerous subtypes, each of which has a different prognosis. Existing stratification methods concentrate on assessing the expression of small gene sets. Next Generation Sequencing (NGS) promises to create large amounts of omics data in the coming years. In this case study, we look into the use of machine learning, namely deep learning, for breast cancer subtyping. We created semi-supervised settings utilizing pan-cancer and non-cancer data because to a lack of publicly available data. We use multi-omics data, such as microRNA expression and copy number variations, to study a wide range of supervised and semi-supervised designs. The accuracy results indicate that simpler models outperform deep semi-supervised approaches on our gene expression data challenge. Deep model performance improves little (if at all) when multi-omics data types are integrated, highlighting the need for greater study on larger datasets of multi-omics data as they become available. From a biological aspect, our linear model usually validates earlier gene subtype classifications. Deep approaches, on the other hand, simulate non-linear interactions, yielding a more diversified and as-yet unexplored set of representative omics features that may be useful for breast cancer subtyping.

AKALYA A , GAYATHRI J L , KANIMOZHI V

CLASSIFICATION OF PLANT DISEASES AND PESTICIDES RECOMMENDATION USING DEEP LEARNING

One of the primary reasons for failure of gather production and agriculture is the distinct discovery and confirmation of plant contaminations. The examination of any recognizable spots in any part of the plant helps us distinguish between two plants, in fact, any spots or assortment disguises. This is the examination of plant disease. One of the most important considerations for cultivating development is the plant's acceptability. It's obvious that it's hard to get the distinctive evidence of plant diseases right. The identification of the condition necessitates a significant amount of effort and authority, as well as stacks of data in the field of plants and analyses of the revelation of those conditions. As a result, picture dealing is utilized to identify plant contaminations. The picture acquisition, picture extraction, picture division, and picture pre-treatment procedures are followed by the disclosure of diseases. By taking pictures of their leaves, stems, and other natural objects, the health issues and wealth of the particular plants can reveal. In a similar vein, let us talk about how this project will be made and how picture pre-processing and extraction will be used.

MOHAMMED SUHAIL S , SOWNDAR RAJAN M, THARUN R

DRUNK AND DRIVE DETECTION SYSTEM

A drunk and drive detection system is designed to prevent individuals from driving under the influence of alcohol. This system uses various sensors to detect the driver's level of impairment, such as their blood alcohol content (BAC) and physical symptoms like slurred speech or erratic behaviour latest annual statistics revealed by the World Health Organization (WHO) in its first Global status report on road safety.80,000 people are killed on Indian roads due to speeding, drunk driving, less usage of helmets, seat belts and child restraints in vehicles. It shows that the problem of drunken driving is far from over .We have develop vehicle accident prevention by method of alcohol detector in an effort to reduce traffic accident cases based on driving under the influence of alcohol. This project is developed by integrating the alcohol sensor with the microcontroller. The alcohol sensor used in this project is MQ-3 Alcohol sensor which detects the presence of alcohol content in human breath. An ignition system with spark plugs is build up as a prototype to act like the ignition starter over the vehicle’s engine. The ignition system will operate based on the level of Breath Alcohol Content (BAC) in human breath detected by the alcohol sensor.

DILIP RAJA S , DHARUN RAJ S , ANAND S

GPS SPEEDOMETER WITH PARENTAL CONTROL USING WIRELESS SENSOR NETWOKS

In the day today life, people are busy with stress work. The user can ride the vehicle in an extremely high speed without knowledge due to late wakeup in the morning and other depressions. The proposed work is an attempt to monitor the speed of the vehicle designed with computer software to enable the parents or owner to get the location, speed, and activity of the driver. To achieve this, the system can transmit the information in real time. The use of GSM/GPRS technologies allows the system to track the objects and provide the up-to-date information. This information is authorized to specific users over the internet as the server gets the information. This paper proposes a prototype model for location tracking using Geographical Positioning System (GPS) and Global System for Mobile Communication (GSM) technology. The development is based on the mobile application which gives an alert to the user who is driving the vehicle and send SMS to the parents, when the person crosses the given input speed limit with the help of GPS, parents can track the vehicle running location and time.

MOHANA RAJ K, SEDHURAGAVAN L, VENKATESH J

IOT BASEDWATERQUALITY MANAGEMENTSYSTEMFOR AQUACULTUREUSINGWIRELESS SENSORNETWORKS

Water is the primary resource for all living things globally, Due to the uneven distribution of water, some of them did not get enough water based on uneven proper management and did not maintain water quality management. The conventional management technique cannot easily interface with the sensor in the water distribution method. So we proposed an improved smart water management system using IoT (Internet of Things). The technique contains a flow meter, solenoid valve, PH Sensor, For example, take an apartment area, the fifty of people using water in a daily manner, the water flows through solenoid value, and it contains a flow meter. Each apartment has a contain flow meter and solenoid value with certain limit accesses of using water, and it analyzes through IoT. If the specific apartment finishes the water level and determines the intimation message through IoT and stops water through solenoid value latterly if the concern achieves the limit the tap was closed automatically. The controller senses the sensor data and output level and the pH sensor is sensing the water quality and distribution of the concerned person with clean water processes

ARAVIND P , KISHORE K , VASANTHAKUMAR G

A COMPREHENSIVE GEO ATTENDANCE REAL-TIME VEHICLE TRACKING SYSTEM

This software's main objective is to provide specific information about the bus monitoring system. In this application, we offer bus tracking system features like attendance, smart notifications, and real-time bus location. This software's goal is to help university and college students overcome the challenges they face. The main issue that students now encounter is missing the college or school bus by the required amount of time. It will affect the education of the students and make them susceptible to mental stress. Our bus tracking application utilises a client and server architecture. For the client/server application in this application, we use Java and XML. This application's primary goal is to address a significant issue that students will encounter while waiting for a college or school bus. Therefore, the Abstract of our system handles all the information regarding the bus's current location and allows for real-time bus tracking. This information is then provided to the remote user who requests real-time bus information. Students can mark their attendance based on location by using bio-metric mobile finger print

MOHAN KUMAR G K , RAJESH P , RANJITHKUMAR M

DEEP LEARNING BASED PERSON RE- IDENTIFICATION USING DEEP NEURAL NETWORK

Deep learning is a subset of machine learning, which is essentially a neural network with three or more layers. These neural networks attempt to simulate the behaviour of the human brain— albeit far from matching its ability—allowing it to “learn” from large amounts of data. Person Re-Identification (ReID) is an intelligent Image surveillance technology that retrieves the same person from different cameras. This task is extremely challenging due to changes in person poses, different camera views, and occlusion. One major challenge of person ReID is the unconstrained spatial misalignment between image pairs due to view angle changes and pedestrian pose variations and the label noise caused by clustering limits the performance of person ReID tasks. For overcome this problem, The proposed method Deep Neural Network (DNN) for person ReID is performed based on the best features, which is pre-processing based on reinforcement learning and aims to learn task-specific sequential spatial correspondences for different image pairs through the local pairwise internal representation interactions. Then, introduce some examples of commonly used datasets, compare the performance of some algorithms on image datasets in recently take, and analyse the advantages and disadvantages of various methods. DNN are used to produce new images that can then be used to train deep learning models for facial recognition.

ARAVINTH K , GOPIKA K , KRISHNARAJ B

E – AGRO CHATBOT – AN AUTOMATED SMART FARMING SYSTEM USING AI

Agriculture Growth is one of the major issues, as a portion of our population is still engaged in the agriculture sector. Farmer's low level of education and lack of communication leads to an absence of awareness regarding modern research and inventions in the agriculture sector. Indian agriculture is being plagued by several problems. The main problems are Weather and Climatic change, Soil quality & erosion, disease detection among the crops, determining the market price of the Agri Products by farmers, etc. These problems, directly and indirectly, affect the life of the farmers. The Smart Farming system using Artificial Intelligence help farmers in automating their farming and also contributes to shifting to precise cultivation for better yield in the crop. Improvement in their quality while using fewer available resources. This system helps farmers to select the right crop based on market scenario and understand climatic conditions due to strong climate changes. The system also provides to a certain extent which crop to cultivate based on the soil health and identifies certain crop diseases.

NAVANEETHA M , OVIYA U , VASANTH A

DRIVER DROWSINESS DETECTION AND VEHICLE CONTROL USING AN IOT DEVICE

Sleepy or drowsy drivers run the hazard of primary accidents. In India, weariness, drowsiness, and a loss of alertness all play a full-size function in street accidents. Attempts at the moment are being made to encompass lane changes, posture/motion analysis, blink frequency detection, and different strategies to display driving force weariness and sleepiness. The reliability of those strategies isn't specifically excessive because of numerous lights situations and inherent man or woman variation. Additionally, those strategies are much less correct in India because of the country's inconsistent street situations and riding situations. The webcam is set up at the dashboard of the automobile appropriate distance in order that the face and eye blink detection is viable. For sensible application, night time imaginative and Eye-blink sensor be used in order that eye detection is viable for the duration of night time instances too and lights in the car will now no longer have an effect on the detection process. The signals captured stay with the aid of using the sensors is constantly fed to the ESP32 controller. The cam32 module is programmed in python language and it analyses the blink charge the usage of duration of the iris because the parameter.

DHIWAKAR S R , DIVIYARASU S , KAVIBHARATH L

BIOMETRIC MUZZLE PATTERN RECOGNITION FOR CATTLE IDENTIFICATION USING DEEP LEARNING

The traceability of individual cows is an important aspect of livestock management. Registration is very important for breeding, production, and distribution of cows. In traditional methods, cows are tagged in the ear, which is harmful. In order to overcome this issue, we proposed the use of a biometric scanner for identification. Numerous papers have proven that the muzzle pattern can be used for cattle identification to eliminate the miss-matched patterns so that the identification performance is increased. The muzzle pattern has characteristics like the human's fingerprint. This solution can be a successful technique to reduce the false matching muzzle patterns. The tip of the nose or muzzle of most animals has unique pattern or a network of tiny growth that are formed in the epidermis layer of the skin. After the birth of an animal, this unique pattern becomes permanent, and it can be seen with the naked eye. Just like the finger print pattern of humans, this muzzle pattern can be used to identify animals. Animal identification systems are required to create and record a unique identifier for each animal which would be helpful in identifying animals for the purpose of applying loans and insurance.

NITHISH KUMAR R , RUTHRAKUMAR A , SAIKAVYA K

SMART ATTENDANCE SYSTEM USING OPENCV BASED ON FACE DETECTION

Attendance management is a critical function in educational institutions, but traditional attendance marking techniques can be time-consuming and tedious. In recent years, automated attendance marking systems based on biometric techniques have become increasingly popular. One such system is the facial recognition attendance system, which uses computerized biometric software to determine or validate a person's identity by comparing patterns based on their facial appearance. This project proposes an OpenCVbased face recognition attendance system that integrates a camera, an algorithm for detecting faces from input images, encoding and identifying the face, and marking attendance in a spreadsheet. The cropped images are stored in a database with respective labels, allowing for accurate attendance tracking. To assess the system's performance, an experimental setup was designed to capture student face images and automatically mark attendance. Results show that the proposed system was able to recognize faces with high accuracy and mark attendance in real-time. However, the system has some limitations, such as the need for a well-lit environment for accurate face detection and recognition, and the need for a stable internet connection if attendance data is to be stored on a cloud server. Additionally, the system requires significant computational resources for real-time video processing, which can limit scalability in large organizations.

SUNDARESAN N , DINESHKUMAR M , DINESHKUMAR

CLASSIFICATION OF ARRHYTHMIA BY USING DEEP LEARNING WITH 2-D ECG SPECTRAL IMAGE REPRESENTATION

The use of electrocardiogram (ECG) recordings for arrhythmia classification has been widely studied in the field of cardiology.In this paper, we propose a novel approach for arrhythmia classification using a 2D ECG spectral image representation and deep learning algorithms. We convert the time-series ECG signals into a spectrogram image, which captures the frequency and time-domain information. Then, we use a pre-trained convolutional neural network (CNN) to extract features from the ECG images and classify the arrhythmia using a support vector machine (SVM) algorithm. We evaluate the proposed approach on the MIT-BIH arrhythmia database and achieve a high accuracy of 98.6%, demonstrating the effectiveness of our method. Arrhythmia is a common cardiovascular disease that can lead to severe complications such as stroke, heart failure, and sudden cardiac arrest. Accurate diagnosis and classification of arrhythmia are crucial for effective treatment and management. However, traditional methods of arrhythmia classification are often limited by their reliance on manual interpretation and visual analysis of ECG signals, which can be subjective and prone to error. By using deep learning and 2D ECG spectral image representation, our proposed approach overcomes these limitations and achieves high accuracy in arrhythmia classification.

SAJITH AHAMED S , SURYA C , VIGNESH A

IOT BASED SEWAGE MONITORING AND MAINTENANCE SYSTEM

The purpose of this project is to measure and evaluate harmful gas levels in real time. To safeguard the safety of workers operating in such hazardous settings. This project seeks to design an IOT system that will detect humidity, temperature levels, and gas mixtures, detecting each type of gas to measure its level while keeping track of the aforementioned parameters' real-time dynamic changes. If the levels surpass the threshold, the vibration alert to the sewage worker under the process and will be sent to the allowed personnel who are remotely situated on the job's linked mobile devices. If a stumbling block is encountered, it may be monitored using notification through mobile application. The MQTT is the Message Queuing Telemetry Transport protocol. This is used to transfer the data from sensor from our proposed system to cloud. Here are certainly a lot of great services out there for data logging, or communicating with your microcontroller over the web, but these services are either too complicated to get started. So, we decided to experiment with our proposed system, and that's Adafruit IO. The ESP32 is the microcontroller with Wi-Fi module. The sensors like humidity, temperature, and gas sensors are interfaced with ESP32 microcontroller to measure level and cloud-based tracking.

GAYATHRI SHREE I S , KANIMOZHI S ,SANGAVEE P

EMAIL SPAM DETECTION USING MACHINE LEARNING

Email spam detection using machine learning is an important application of artificial intelligence in the domain of cybersecurity. It helps to protect users from the dangers of malicious emails that could contain phishing scams, malware, or viruses. The system works by analyzing various features of the email, such as sender's identity, content, and language, to determine the likelihood of it being spam. Machine learning algorithms can be trained on large datasets of labeled emails to improve the accuracy of classification over time. This project has various benefits, including reducing the time spent on manual email filtering, minimizing the risk of security breaches, and improving the overall efficiency of email communication. It can be implemented in a variety of settings, including personal email accounts, corporate email systems, and cloud-based email clients. In the future, email spam detection using machine learning has the potential to evolve and become even more sophisticated, incorporating new technologies such as blockchain to improve security and prevent email spoofing.

BALACHANDAR G , DHAYANANTH M , KAVIN KUMAR S

AN INTELLIGENT THIRD-EYE FOR VISUALLY IMPAIRED PERSON USING DEEP LEARNING ALGORITHM

The major issues faced by the blind people is navigating from one place to another place and alsolack of accessing the information from the sources like books, website or in any other form of sources. In occur of any situation, they need to be depended on others to avoid obstacles or to access the information from the sources. To rectify these problems and gain self-sufficiency, a smart stick was developed for the blind people to assist in moving from one to another location either in indoor or outdoorenvironments and also to access the information from the sources. In the proposed model, the ultrasonicsensor detects the objects in the surface and notifies the blind person with the help of a buzzer. The web-camera is capable to capture the images, that the captured image will be processed to extract the featuresusing Artificial Neural Network and Light Gradient Boost Machine. Once the device detected, the trained data set was matched with the detected substances, it will give an audio message about the type of an object through the android app and it givesstep by step instructions to the usersto avoid obstacles.For a security mechanism, a GPS module is also attached. In case of any emergency situation, the location of the user and the alert message will notify the guardian through the GSM module.

GOWRISHREE B KANIMOZHI P KAVINAYA V

SCHOOL ZONE AND HOSPITAL ZONE VEHICLE SPEED CONTROLLER USING RF TX RX

The main objective is to design a controller and a display, meant for vehicle's speed control and to monitor the zones, which can run on an embedded system. Display & Control can be custom designed to fit into a vehicle's dashboard, and display information on the vehicle. The proposed system is composed of two separate units: Zone status transmitter unit and receiver (speed display and control) unit. Whenever the vehicle is within the transmitter zone, the vehicle speed is controlled by receiving the signal, i.e.., every time the vehicle speed is decreased bysome cut off and kept constant until the vehicle moves out of the transmitter zone, and then the vehicle can get accelerated by itself. The IR sensor detects the speed ofthe vehicle and sends the information to Micro controller. Micro controller interacts with motors through driver IC to take appropriate directions to prevent accidents. The Simulation technique for speed control has been given which is installed in almost all the upcoming vehicles. Thus we hope this can revolutionize the traffic management and avoid accidents caused due to over speeding in the near future.

BOOPATHY M , GOWTHAM P , DHARSHAN M

IOT BASED WEB APPLICATION PATIENT MONITORING USING RFID READER

Radio Frequency Identification (RFID) has become popular in so many fields from military to industry applications. RFID tags have been embedded into many various products especially in logistics sector. A tag stores individual information of its attached object and an RFID reader communicates with the tag in radio frequencies to identify the object. This object to be monitored may also be a human. In our work, RFID technology is applied in health care systems. The system supports wireless mobile communication between the RFID tags and readers. To track a patient's health, it has sensors for temperature, heart rate, and an accelerometer. Many people suffer during crucial situations like various health difficulties since the majority of patients do not receive proper treatment. Radio Frequency Identification (RFID) is a communication technology which allows for defining some unique characteristics of an object or a living being, usually its identification information, by relating it to a numeric serial number within a tag, and ensures that this number is conveyed by using radio waves. RFID supports several data encryption and provide high scale security to data. RFID provides a communication infrastructure at the radio frequencies between a special tag and reader device that can detect the tag, and allows for establishing communication between devices within the system without any physical contact, or even without seeing each other.

HARIHARASUDHAN M , SRINATH S , KUMARESAN V

PIN CONSERVATION SYSTEM USING ILLUSION METHODOLGY

An Individual Recognizable Proof Number (PIN) is a grouping of digits that affirms the character of an individual when it is effectively introduced. The development of PIN verification is a consequence of its ceaseless utilization for quite a long time in an extensive variety of regular day to day existence applications, similar to cell phones and banking frameworks. PIN validation is powerless to animal power or in any event, speculating assaults. IPIN utilizes the procedure of half and half pictures to mix two keypads with various digit orderings in such a manner, that the client who is near the gadget is seeing one keypad to enter her PIN, while the assailant who is taking a gander at the gadget from a greater distance is seeing just the other keypad. To beat shoulder-riding assaults on confirmation plans by proposing Deception PIN (IPIN), a PIN-put together verification strategy that works with respect to contact screen gadgets. The client's keypad is rearranged in each validation endeavor since the assailant might remember the spatial game plan of the squeezed digits. The Perceivability calculation frames the center of our work and we might want to analyze whether evaluating the Perceivability of pictures other than half breed keypads can be utilized.

SRIRAM R , SURAJ S , SURENDRAN S

AN AUTOMATED CHRONIC DISEASE MANAGEMENT FOR CARDIAC ARREST DETECTION AND PREVENTION ON EMERGENCY USING INTERNET OF MEDICAL THINGS (IOMT)

The Internet of Medical Things (IoMT) is a world of interconnected things that can sense, stimulate, and collaborate with one another and with the environment. Heart attacks have become more common in recent years, putting people's lives at risk. However, it is extremely complex and difficult to maintain/monitor health conditions in physical mode all the time, especially at night and while traveling. If a senior person or patient suffers from health issues such as sudden cardiac arrest or a rise/fall in blood pressure levels in their body, it will be incredibly tough to receive immediate assistance from others as well as medical agencies. The suggested method uses a pulse sensor to automatically monitor heart rate and a MEMS pressure sensor incorporated into IoMT devices to measure blood pressure (BP). If an elderly individual has a cardiac arrest, an automatic call with the exact GPS location is sent to a nearby ambulance service and their caretakers. The benefit of this method is to prevent unexpected death or major illness due to heart disease and may also be conveniently monitored by sending text messages with their heartbeat rate as a daily report to caretakers.

HARSHINI N , KAVIN KUMAR M , KEERTHIVASAN R

SKIN DISEASE DETECTION BASED ON DEEP LEARNING

Increasing of mobile applications makes it easier for humans to get up to date information. Users are searching for an answer from the virtual world, including health problems. This system discusses the mobile application of skin disease detection based on the image. The system requires dataset of unhealthy skin images. This system designed to detect the skin disease from unhealthy images. preprocessing of the images will be compared by finding the difference in threshold value. The difference in threshold value will be put forward in the decision-making against suspected unhealthy skin that being detected. The app was built with Android Studio with an OpenCV library for implementing the CNN (Convolutional Neural Network). Android-based mobile applications have been successfully created, and it is able to detect the skin disease image. However, based on detection, it is providing a suggestion of the disease.

PAVITHRAN T , SURIYA M , VIDHYAASAGAR G

SEGMENTATION AND CLASSIFICATION OF ALZHEIMER'S DISEASE USING DEEP LEARNING AND REGION-BASED CONVOLUTIONAL NEURAL NETWORKS(RCNN)

Deep learning, a state-of-the-art machine learning approach, has shown outstanding performance over traditional machine learning in identifying intricate structures in complex high-dimensional data, especially in the domain of computer vision. The application of deep learning to early detection and automated classification of Alzheimer's disease (AD) has recently gained considerable attention, as rapid progress in neuroimaging techniques has generated large-scale multimodal neuroimaging data. Alzheimer is one of the types of Dementia. It is a brain disorder disease, which occurs for the people of age 60 and now a day it affects the middle age people also. So we focus on this disease and they are trying to control the disease with various techniques. Feature extraction is one of the issues in the prediction using large dataset processing but the problem is it cannot find the classification and exacting the accurate features from data sets. To overcome the issue, to proposed the Region with convolutional Neural Network (RCNN) used for efficient to classification and feature extractions. Feature extraction and selection is one of the important key factors for the classification. To investigate the feature extraction and selection for getting better classification and the Improving the performance.

MOHAN RAJ V , ARAVINTH M , ASHOK R

REAL-TIME VECHILE DETECTION USING OPENCV AND PYTHON

As the number of vehicles on the road's increases, managing traffic becomes a significant challenge. To effectively plan, monitor, and control traffic, a non-intrusive system is required that can capture and analyze video data without affecting the flow of traffic. In this paper, we propose a solution to this problem using video surveillance data from traffic cameras. O We implement the system using OpenCV and Python. Our proposed system can accurately identify, track, and count vehicles in real-time, allowing us to detect and manage congestion. By combining this system with traffic management techniques, we can effectively manage traffic flow and reduce the incidence of accidents. As the world becomes more urbanized, managing traffic in cities is becoming a major concern. With the increasing number of vehicles on the roads, traditional methods of traffic management are no longer sufficient. In this paper, we propose a non-intrusive system for monitoring and analyzing traffic using video data from traffic cameras. Our system utilizes advanced computer vision techniques such as object detection, tracking, and classification to identify and count vehicles in realtime.

ASHWIN V , GOKULRAJ R

SALIENT REGION DETECTION PIXEL EVALUATION APPROACH USING MEDICAL IMAGES

Image processing is often viewed as arbitrarily manipulating an image to achieve an aesthetic standard or to support a preferred reality. However, image processing is more accurately defined as a means of translation between the human visual system and digital imaging devices. By using salient region detection and segmentation method which is useful in applications such as objectbased image retrieval, adaptive content delivery, adaptive region of interest-based image compression and smart image resizing . This identify the salient regions as those regions of an image that are visually more conspicuous by virtue of their contrast with respect to surrounding regions. Similar definitions of saliency exist in literature where saliency in images is referred to as local contrast . This method for finding salient regions uses a contrast determination filter that operates at various scales to generate saliency maps containing "saliency values" per pixel. Combined these individual maps result in final saliency map. To demonstrate the use of the final saliency map in segmenting whole objects with the aid of a relatively simple segmentation technique. The novelty of this approach lies in finding high quality saliency maps of the same size and resolution as the input image and their use in segmenting whole objects. T

DEEPAKRAJ D , GAYATHIRI K , IRAGUL P

VIRTUAL TRY ON CLOTHES USING - AUGMENTED REALITY

Our proposed system is a web application that will be really useful for the customers and also for vendors. It is a one-stop solution for all the shopaholics. It overcomes the disadvantage of going to stores in search of the products and waiting in the queue to buy the product. Our proposed system is that we can be able to buy whatever products we want, from wherever we are. This can be utilized in shops, restaurants, and many other stores which helps in increasing the productivity and contributes to the economy as a whole to a larger extent. This application has a lot of stores in a single platform. The most interesting part is that, we're using an Augmented Reality (AR) with which we can experience the trails in our place. This augmented reality helps the customers to identify their suiting perfectly as they experience in physical shopping mode. This application can be used by any range of group or communities that is more convenient and saves a lot of time

PRIYADHARSHINI R , SANMATHEE S N , VIMAL KISSHORE B V

VIRTUAL LABORATORY FOR JAVA

The Java Virtual Lab is an innovative online platform that offers a simulated environment for learning and practicing Java programming. This platform is designed to provide users with a safe and controlled environment in which they can experiment with coding without the need for any specific hardware or software installation. The Java Virtual Lab offers a range of programming exercises and challenges to enable users to practice and refine their coding skills. These exercises are designed to be interactive and engaging, allowing users to explore the various aspects of Java programming in a fun and practical way. Additionally, the lab offers users access to interactive tutorials, video lectures, and other educational resources to enhance their learning experience. One of the key features of the Java Virtual Lab is its ability to simulate a range of Java programming scenarios. This means that users can experiment with coding in a simulated environment that mimics real-world programming challenges.

RAMESHARAVIND G , SAKTHIVEL S , SARAVANAPRIYAN T

VIRTUAL MOUSE USING HAND GESTURES

Gesture-controlled laptops and computers have recently gained a lot of traction. Leap motion is the name for this technique. Waving our hand in front of our computer/laptop allows us to manage certain of its functionalities. Over slides and overheads, computer-based presentations have significant advantages. Audio, video, and even interactive programmes can be used to improve presentations. Unfortunately, employing these techniques is more complicated than using slides or overheads. The speaker must operate various devices with unfamiliar controls (e.g., keyboard, mouse, VCR remote control). In the dark, these devices are difficult to see, and manipulating them causes the presentation to be disrupted. Hand gestures are the most natural and effortless manner of communicating. The camera's output will be displayed on the monitor. The concept is to use a simple camera instead of a classic or standard mouse to control mouse cursor functions. The Virtual Mouse provides an infrastructure between the user and the system using only a camera. It allows users to interface with machines without the use of mechanical or physical devices, and even control mouse functionalities.

ROSSHAN BANU S , RUBY ANGEL R , SOMAISWARIY S

GEOMENTOY – PROMOTING INCLUSIVE EDUCATION FOR KIDS

Geomentoy aims to help the children of the Divyang (blind and deaf) community learn mathematical logic and geometry through playing with the toy. Geomentoy will enhance the learning of kids through real-time learning and practical exposure is the primary objective of the toy. Although the product is not currently available on the market, we aim to help blind people learn shapes and arithmetic calculations and enhance their knowledge experience. Among those products are a literacy tool enabling independent learning and a tactile tablet that allows the visually impaired to experience graphical content. Like any other skill, a Divyang child can learn better using braille sooner. It has been created for Divyang kids to assist them in learning math skills. This project teaches basic math concepts through braille language to Divyang community kids. The toy will be sold mostly to children of Divyang heritage; however, most available products are often considered too complex or expensive to buy it would be in substitute rate to buy. Nearly 1.6 million Divyang kids in India, the children are good in sensory skills. The Divyang community needs to improve its logical skills. The Divyang community's motive is to educate kids which is a chall enging task for a tutor(trainee) in this field of schools

RUTHUJA MAHESH , DABADE SNEHA T , SURYA R

INTELLIGENT DOOR LOCK SYSTEM USING ENSEMBLE MACHINE LEARNING ALGORITHMS

The Internet of Things (IoT) is now a critical component of home automation and security, particularly for door lock systems. Face recognition powered by IoT is becoming more popular because it is dependable and simple to use. To prevent algorithmic errors and produce enhanced accuracy than existing systems, our system employs a facial recognition door lock with the integration of three algorithms on a single camera. The system detects unauthorized people near the entrance and notifies the user via a mobile app. For hardware communication, we used a camera module, a Raspberry PI, passive infrared motion sensors, and wireless internet access. The Python and OpenCV libraries are used in the algorithm's development. When the motion sensor detects activity in front of the door, the camera is activated, and the system gathers camera feeds and sends the images to three algorithms for analysis. If any two or all the algorithm's results match the image in the database, the door unlocks; otherwise, it remains locked. The development of this system aims to enhance accuracy by combining three algorithms and to provide consumers with data about what is happening in front of their home via a smart door lock system.

SAKTHISARAN S , SUBALAKSHMI P , THILAGAVATHI A

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Sundar Pichai, born on July 12, 1972, in Madurai, Tamil Nadu, India, grew up in a middle-class family. His father was an electrical engineer, and his mother was a stenographer. From a young age, Pichai showed a keen interest in technology, especially in numbers and memory.

He studied Metallurgical Engineering at the Indian Institute of Technology (IIT) Kharagpur and later pursued an M.S. in Material Sciences and Engineering from Stanford University. He also earned an MBA from the Wharton School at the University of Pennsylvania, where he was recognized as a Siebel Scholar and a Palmer Scholar.
Pichai joined Google in 2004 and played a key role in the development of Google Toolbar and Google Chrome, which became the world's most popular web browser. His leadership in Chrome's success earned him greater responsibilities, leading major projects like Google Drive, Chrome OS, and Android.

In 2015, he was appointed as the CEO of Google, and later, in 2019, he became the CEO of Alphabet Inc., Google's parent company. Under his leadership, Google expanded its influence in AI, cloud computing, and consumer technology.
Pichai is known for his humble nature, strategic thinking, and innovative mindset, making him one of the most influential tech leaders in the world today.

If you don't fail sometimes, you are not being ambitious enough.

- Sundar Pichai