

MAHARASHTRA INSTITUTE OF TECHNOLOGY (AN AUTONOMOUS INSTITUTE)



UHAT'S UF

2022 I E-MAGAZINE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Department of Computer Science & Engineering

Mission

To develop the department as a center of excellence in the field of Computer Science and Engineering by imparting knowledge & training to the students for meeting growing needs of the industry & society.



Vision

Providing quality education through a well designed curriculum in tune with the challenging needs of software industry by providing state of the art facilities and to impart knowledge in the thrust areas of Computer Science and Engineering.

Program Educational Objectives



To prepare the students to achieve success in Computing Domain to create individual careers, innovations or to work as a key contributor to the private or Government sector and society.

To develop the ability among the students to understand Computing and mathematical fundamentals and apply the principles of Computer Science for analyzing, designing and testing software for solving problems.





To empower the students with the ability to quickly reflect the changes in the new technologies in the area of computer software, hardware, networking and database management.

To promote the students with awareness for lifelong learning, introduce them to professional practice, ethics and code of professionalism to remain continuous in their profession and leaders in a technological society.



PROGRAM OUTCOMES

p01

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 analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural science and engineering sciences.

p03

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

P04

Conduct Investigations of Complex Problems: Use research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.

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.

P06

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.

P07

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.

Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 10

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.

p011

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.

PO 12

Life-Long Learning: Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

Message from HoD

Industry 4.0 the revolution ahead!

Industry 4.0 is revolutionizing the way companies are manufacturing and distributing the products. It is becoming increasingly common for manufacturers to integrate new technologies into their production facilities and throughout their operations, such as the Internet of Things (IoT), cloud computing and analytics, and artificial intelligence (AI).

A key component of smart factories is the Internet of Things (IoT). On the factory floor, machines are equipped with sensors that have IP addresses, which allow them to communicate with other web-enabled devices. This mechanization and connectivity make it possible for large amounts of valuable data to be collected, analyzed, and exchanged.

An Industry 4.0 strategy cannot be complete without cloud computing. Smart manufacturing requires connectivity and integration of engineering, supply chain, production, sales, and distribution. Cloud helps make that possible. Al and machine learning allow manufacturing companies to take advantage of the volume of information generated not just on the factory floor, but across their business units, and even from partners and third-party sources. Al and machine learning can create insights providing visibility, predictability and automation of operations and business processes. When undergoing a digital transformation to Industry 4.0, it is essential to consider a cybersecurity approach.

Industry 4.0 is the realization of the digital transformation of the field, delivering real-time decision making, enhanced productivity, flexibility, and agility. It is therefore important to carefully monitor and comparatively understand the recent developments in industry, and accordingly understand the impact of the trends in computer science and software technologies. The education process needs to be tailored to answer the mid-term and long-term needs of industry and society. It must focus on the core concepts, gaining analytical skills, critical thinking, and reasoning instead of memorizing what are in the books. Emphasizing on problem solving/synthesis and working in multi-disciplinary projects will give an insight to work in the whole new era of Industry 4.0.



Dr. Smita Kasar Head of CSE Department





In virtual reality (VR), we experience a simulated world that can resemble the real world or be entirely different from it. In addition to entertainment (such as video games), virtual reality has applications in education (including medical or military training) and business (such as virtual meetings). In addition to virtual reality, augmented reality and mixed reality also fall under the umbrella of extended reality or XR.

A virtual reality system generates realistic pictures, sounds, and other sensations by using either a virtual reality headset or a multi-projected environment.

History of Virtual Reality

The history of virtual reality begins with the View-Master (a stereoscopic visual simulator) in 1939 and Morton Heilig's Sensorama multi-experience theatre in the 1950s. Several years later, the first head-mounted display (HMD) was developed. Then, designers focused on professionally geared applications in the 1970s and 1980s. Military training, medicine, and flight simulation could all benefit from more sophisticated VR experiences. Video games introduced VR to the wider consumer world after 1990, just after "Virtual Reality" became popular. Since then, VR has become increasingly sophisticated and affordable.

Through VR design, you strive to give the user an opportunity to experience an alternative existence through the senses your design is capable of accessing. Your users will feel more immersed in virtual reality if your design appeals to their sense of sight, hearing, and touch. Therefore, you want to isolate users from the real world as much as possible.

HEALTH AND SAFETY

There are many health and safety considerations of virtual reality. Several unwanted symptoms have been caused by prolonged use of virtual reality, which may have slowed the technology's proliferation. Most virtual reality systems come with consumer warnings, including seizures; developmental issues in children; tripand-fall and collision warnings; discomfort; repetitive stress injury; and interference with medical devices. The Wall Street Journal reported in January 2022 that VR use could cause physical injuries such as leg, hand, and arm injuries. Neck injuries and deaths have also been linked to VR usage.

CHILDREN IN VIRTUAL REALITY



The experience of VR by involve children may simultaneously thinking about the virtual world while experiencing the physical world. The excessive use of immersive technology with very salient sensory features sensory lead can to overload

It is particularly dangerous for children to wear VR headsets that block out the location of objects in the real world, which compromises their ability to maintain the rules of the physical world. Immersive VR provides users with multisensory experiences that mimic reality or create impossible or dangerous scenarios in the real world. Observations of 10 children experiencing VR for the first time suggested that 8-12-years-old kids were more confident to explore VR content when it was in a familiar situation, e.g. the children enjoyed playing in the kitchen context of Job Simulator, and enjoyed breaking rules by engaging in activities they are not allowed to do in reality, such as setting things on fire.

PRIVACY IN VIRTUAL REALITY

VR systems require persistent tracking, which makes them particularly useful for mass surveillance, as well as vulnerable. As VR expands, personal actions, movements, and responses can be gathered at a lower cost and with greater potential. Virtual reality headsets equipped with eye-tracking sensors may indirectly reveal information about a user's ethnicity, personality traits, fears, emotions, interests, skills, and physical and mental health.

APPLICATIONS OF VIRTUAL REALITY



- VR in Military
- •VR in Education
- VR in Sports
- VR in Sports
- •VR in Mental Health
- •VR in Fashion

VR in Marketing

- VR in Architecture
- •VR in Medical Training

"The incredible thing about the technology is that you feel like you're actually present in another place with other people. People who try it say it's different from anything they've ever experienced in their lives."

- Mark Zuckerberg



Priyanka Gupta SY-CSE

NETWORK SECURITY AND CRYPTOGRAPHY

ABSTRACT:

Cryptography is the science of information security. In order to guarantee the safe transmission of data through the web, information security is of extreme importance. As society moves towards the digital age of information, network security issues are also becoming more important. Because more and more people are connecting to the internet, cyber-attacks are increasing. Cryptography is derived from Greek kryptos, meaning concealed. Critical issues, such as computer and network security, need to be protected. This article provides an overview of Network Security and various techniques that can enhance Network Security, such as Cryptography.

KEYWORD

Network
Security,
Cryptography,
Decryption,
Encryption.



INTRODUCTION:

In the fast-developing modern Internet technology and information technology, more and more individuals, enterprises, schools, and government agencies are joining the Internet, thereby causing more illegal users to attack and destroy the network by using fake websites, fake mail, Trojan horses, and backdoor viruses. The intruders target computers, so once they succeed, thousands of network computers will be paralyzed. Furthermore, some invaders with ulterior motives look upon the military and government departments as targets, which pose enormous social and national security threats.

Cryptography means "Hidden Secrets" is concerned with encryption . In cryptography, systems for securing correspondence are investigated. It can help in examining conventions associated with different viewpoints in data security, such as verification, classification, non-denial, and information uprightness.

Cryptography is the science of writing in secret code. More generally, it is about constructing and analyzing protocols that block adversaries; various aspects in information security such as data confidentiality, data integrity, authentication, and non-repudiation are central to modern cryptography.

Asset imperative sensor arrangements requires the safe exchange of key between sender and receipient. Before the information is sent to remote distribution storage service, it must first be scrambled by clients and both information security and information get to security ought to be ensured to such an extent that distributed storage specialist organizations have no capacities to unscramble the information, and when the client needs to pursuit a few sections of the entire information, the distributed storage framework will give the availability without recognizing what the segment of ten coded information came back to the client is about.



LITERATURE SURVEY

Network Security Model

Over some kind of internet administration, messages will be exchanged from one gathering to the next. A third party might be responsible for delivery the mystery data to the sender and beneficiary while keeping it away from competitors. As part of the process of building a safe system, it is important to consider the accompanying factors.





Confidentiality

Information can only be viewed by individuals who have the authority to view it. An unauthorized individual cannot be able to view data for which they are not entitled to. It is nothing but the secrecy or concealment of information and resources.

Integrity

The integrity of data pertains to data generation and modification. Only authorized individuals can generate, modify or delete data.





Accountability

It is the ability to track actions performed on a system to specific system entities (such as users, processes, devices)

Availability

Data or the system must be available for use when an authorized user requests it.



Non-Repudiation

It is the ability to verify that an online transaction is legitimate and that it was sent and received by same person.

Reliability

It refers to the ability of a computer-related hardware or software component to consistently perform according to its specifications and procedures intended result.



Authentication

Authorization is the process of finding out user identity or other entity by following three ways :

- Something only you should know : username and password
- Something you have: only those individuals with the correct key can be able to open the key.
- Something about you : This method involves something that is unique about you like fingerprint, DNA samples, etc.

Authorization

The process of verifying that a known person has the authority to perform a certain action. Authorization cannot be achieved without authentication.

El Cryptography (1.88%) (1.88%

What is Cryptography?

Making a cryptosystem that protects information is the art and science of cryptography.

Digital information is actually secured with cryptography, which refers to the design of devices based on arthmetical algorithms that provide basic security services You can think of cryptography as the organization of a large toolkit contain different techniques in safety application.

Cryptography is a method of storing and transmitting data in a particular form so that only those for whom it is intended can read and process it.

Components of a Cryptographic system

The various mechanism of a basic cryptosystem are as follow-



Key

A key is a numeric or alpha numeric manuscript or may be a unique figure



Plain Text

The confidential data that should be secured while transmission is referred as plain text.





Cipher content is a message that cannot be understood by anyone or that has no purpose. Take "Ajd672#@91ukl8*^5%" as a Cipher Text for "Hi Friend how are you". As ciphertext begins with a type of plaintext that can't be detected by a human or computer without a specific figure to unscramble it, it's also called scrambled or encoded or encoded data.

In decoding, ciphertext is transformed into meaningful plaintext by working backwards from encryption. The ciphertext is not to be mistaken for code content in light of the fact that the last is an aftereffect of a code, not a figure. The plain text is converted to the unreadable form.



Encryption

Encryption is the process of converting plain text into figures. A key and encryption calculation are required for this procedure. Encryption happens at the sender's end. Calculation refers to the system used as part of encryption.



Decryption

It is the process of changing plain text into cipher text that is known as decryption. Unscrambling calculations and keys are both required for decoding. Decryption uses the same calculation method. By and large, both calculations are the same.

CONCLUSION

With the touchy development in the Internet, system and information security have turned into an unavoidable sympathy toward any association whose interior private system is associated with the Internet. The security for the information has turned out to be exceptionally vital. Client's information security is a focal question over cloud.

The article displayed different plans which are utilized as a part of cryptography for Network security.



Vaishnavi Savant SY CSE



Introduction

Nowadays most trending topic in news or elsewhere is cyber crime and attacks and cyber security. This is increasing with great speed .cyber security attacks are very destructive, sophisticated and dangerous.

Throughout the 2020–21, the most widely spreading attack is "PHISHING attack". It is a kind of hacking in which hackers can easily practice any fraudulent behaviour and steals the credential information like user name ,password, credit card details, other bank details, etc,very easily. This kind of attack is very simple and effective. Most of the phishing attacks are done by Email. As we know that hackers can pose various mails or spam messages and tricks the users for downloading malware and entering into the malicious link.



Types of phishing attack



We have always notice various kind of phishing attack in our daily life.



Email Phishing



spear phishing



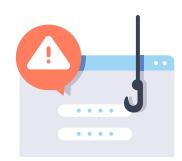
ceo fraud phishing



vishing and Smishing



Angler Phishing



Watering Hole Phishing

History of the Phishing Attack

- 1. First Phishing attack was practice in mid of 1990s.in this, a troupe of hackers perform the role of AOI company's employee role and hijack their systems.
- 2. Second attack was done in 2001s ,in this attack hackers had directly attacked on the E-currency site of E-Gold scheme.
- 3. Third attack was held on 2002 .in this hackers directly took their step into financial dept. and now in 2022, Phishing attack is adversely spreading.
- 4. The biggest history of the Phishing is the Ransom attack which was held on 2 july 2021 .as compared to 2020, the ransom attack in 2021 rosed by 97.5%. due to this attack company as well as country face the huge loss.

How can we find the way for preventing the Phishing attack?

Step 1: Prevent PHISHING:

- 1.By Blocking the site of PHISHING either manually or by automation practice by Artificial intelligence.
- 2.By filtering the Email or URL in which machine learning concept is used



Step 2: Detect PHISHING:

- 1.Don't use meliculos websites and avoid spam mails.
- 2. Focus on the Warning given by the indicators of web browsers.
- 3. Apply the Branded verification system.
- 4.Also focus on the certified identification of mails and URLs.



Step 3: Stakeholder trainings:

- 1. Anti-PHISHING games .
- 2.Embedding training.
- 3.Use comic to outline the key tips for providing security to the personal and social information of users.
- 4.Design anti-Phishing software with the help of AI & ML.



What is our contributions on preventing the Phishing attack?

- 1. We should firstly build up the knowledge about Phishing attack.
- 2.Conduct the anti-phishing camp as well as online workshops and provide the information on phishing to each and every citizen of the world.
- 3. Conduct the training by very professional teachers.



Sakshi ughade SY CSE

"Jan Avshadhi, Jan Upyogi"



With the objective of an making quality generic medicine available at affordable price to all, "Pradhan Mantri Bhartiya Janaushadhi Pariyojana" (PMBJP) was launched by the Department of Pharmaceuticals, Ministry of Chemicals and fertilizers, Government of India. It can benefit as ensure access to quality medicines for all sections of the population especially the poor and the deprived ones. Create awareness about generic medicines through education and publicity to counter the perception that quality is good.

"A medication created to be the same as an already marketed brand-name drug in dosage form, safety, strength, route of administration, quality, performance characteristics, and intended use."





Generate employment by engaging individual entrepreneurs in opening of PMBJP kendra.

To ensure awareness in masses, various media platform like print, outdoor, TV and social media etc. are being used regularly. Product basket has also been expanded to provide complete range of medicine for increasing footfall to the kendra. New medicine and nutracetiucal products are also available. Making quality medicine available at affordable price. The mission of this scheme is to create awareness among public regarding generic medicine. Demand for generic medicine through medical practioner.

Make available unbranded quality generic medicines at affordable prices through public-private partnership. Encourage doctors, more specifically in government hospital to pescribe generic medicine. The branded medicine were sold at significant higher price than their unbranded generic equvialent, through are identical in the therapeutic value.



Jan aushadhi initiative will make available good quality drugs at affordable prices through dedicated stores selling generic medicines which are available at lesser price but are equivalent in quality and efficacy as expensive branded drugs.



Mayank Patle
TY CSE



What is Metaverse?

Like the early days of the Internet, the Metaverse is a new beginning for creating something new. Tech tycoons call metaverse the future as billions are invested in its development. But what does metaverse actually mean? The term metaverse was coined in 1992 by science fiction writer Neal Stephenson. As a concept, it is described as "a fully immersive virtual world where people socialize, play, and work.". In this virtual world, augmented reality (AR) and virtual reality (VR) are fused with blockchain technology and social media principles to create rich user interfaces.

As a result of Facebook's rebranding as Meta, the metaverse concept will revolutionize the way we interact with the world. According to Mark Zuckerberg, Facebook's CEO, "the next wave of the internet is metaverse", which encompasses existing social media platforms. He describes the metaverse as "a virtual environment where you can present yourself with people in digital spaces. You can kind of think of this as an embodied Internet that you're inside of, rather than just looking at."

How Blockchain Technology Underpins the

Metaverse?

With blockchain technology, any item you own or produce is unique and cannot be replicated or stolen. In the metaverse, blockchain technology ensures that unique digital goods are traded.



The metaverse is also run by cryptocurrencies; everything is bought and sold using different types of cryptocurrencies. NFTs are a common term in the metaverse. Non-Fungible Tokens (NFTs) are cryptographic tokens that cannot be duplicated on a blockchain. Real-world items can be represented by NFTs as collectible digital assets that hold value in the same way that physical ones do; for instance, a piece of land in the metaverse falls under this category.

Will the Metaverse Replace the Real World?

The metaverse can shape the future in which we spend more time in the virtual world than in reality. You are represented by an avatar in the metaverse, similar to the avatars Facebook began using in 2020. The issue of geography, especially when it comes to business interactions, is expected to be eliminated by this technology.

The metaverse train will have been boarded by an increasing number of businesses by 2022, according to Harding. Many executives anticipate that one day, individuals will be creating their own metaverses instead of Oasis.



How Important are Cryptocurrencies in Metaverse?

The metaverse is built on blockchain technology, and cryptocurrencies use the same technology as well. As a result, it will be the most popular form of payment in the metaverse. Using cryptocurrency will be the simplest, most convenient, and least expensive method to embark on a global metaverse shopping trip.



Cryptocurrencies can be used at any store, regardless of location. You won't waste money on international communication or transaction costs if you use crypto, and most stores in the metaverse accept all major cryptocurrencies.

How Will Businesses Trade in the Metaverse?

Bloomberg Intelligence's metaverse represents a "\$800 billion market opportunity." The metaverse creates a new economy in which wealth will be generated, traded, and increased with a different currency yet connected to real-world money. Soon, firms will be established, offices will be constructed, conferences for remote workers will be held, and job interviews will take place in the metaverse.

The metaverse will see a surge in digital commerce, primarily as bigbox retailers like Walmart aim to sell things there. CNBC reported Adidas launched NFTs and purchased land on Sandbox VR, a virtual real estate firm. Gucci, a fashion brand, collaborated with game developer Roblox to sell goods in the metaverse. In order to offer virtual stores, Balenciaga has worked with Epic Games, the maker of Fortnite. Nike acquired RTFKT, a well-known metaverse company with a line of footwear. In less than seven minutes, an 18-year-old designer sold virtual shoes for more than \$3 million. Nike is looking to hire virtual wear designers and has a field for trademark applications for its trademarks on virtual footwear, among other things.

Final Thoughts – Why is Metaverse the Future?

- The metaverse is a topic that the IT sector is particularly interested in, and it projects that it will be valued at \$800 billion by 2024 and have a community of one billion people by 2030.
- The next phase of Nvidia's metaverse development strategy, according to the CEO, has a market potential of \$10 billion over the following five years.
- Bill Gates, the CEO of Microsoft, predicted that in three years, virtual meetings will move to the metaverse and that people will start using avatars and VR headsets more frequently at work.
- People will create avatars in the metaverse that resemble them exactly as they are in reality. They will spend money to outfit and adorn their avatars with distinctive clothing and accessories.
- People will be able to connect through platforms like AltspaceVR for live virtual events like comedy clubs or music festivals, developing community-based metaverse experiences.
- Buildings called metaverse malls will let you restock your avatar's wardrobe with items from virtual world shops.
- At some point in the future, augmented reality will be used in the metaverse. With AR glasses, you can view the "holograms" of the metaverse here against the backdrop of the real world.
- In the future, the idea is to connect all of the metaverses so that your avatar and digital assets may be smoothly moved from one to the other.
- Companies will construct "physical" outlets in the metaverse, and they may also pay developers to do it. In high-traffic areas of the metaverse, "real estate" will undoubtedly be more expensive.



Ustad Syed Farhaan SY CSE

DATA ANALYTICS



Analyzing data collections to identify trends and make judgments about the information they contain is known as data analytics (DA). Data analytics is increasingly carried out with the use of specialist hardware and software.

In order to help businesses make better business decisions, data analytics technologies and methodologies are widely used in the commercial sector. Analytics tools are also used by scientists and researchers to support or refute scientific models, theories, and hypotheses.



Data analytics is a word that generally refers to a range of applications, from straightforward business intelligence (BI), reporting, and online analytical processing (OLAP), to several kinds of advanced analytics.



Analytics in Business

Adding a little bit of Data analytics initiatives can help businesses increase revenue, improve operational efficiency, optimize marketing campaigns and bolster customer service efforts.

Analytics also enables organizations to respond quickly to emerging market trends and gain a competitive edge over business rivals. The ultimate goal of data analytics, however, is boosting the business performance of body text.

Future of Data Analytics in India



Big Data is widely used in India, which results in high employment rates, higher salaries, and easier access to cutting-edge technology for people. By acquiring a big volume of data, expanding business models, igniting creative processes, and fostering overall corporate growth and development, analytics can significantly alter the current business environment.

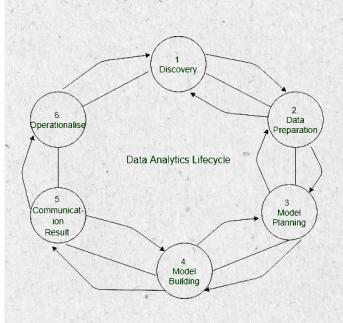


There is a high demand for analytics, business which modern combines tools. analytics, programming, business administration, and IT. Business analytics enables us to enhance already-existing data, make it safequard it, and accessible for usage in the future in a better and more efficient manner.

Some Indian industries that use business analytics are those in finance, media communications, outsourcing, and online businesses. In order to discover potential hazard sections and reduce risks, banks utilize data mining techniques to filter the populated data and segment the accessible data using a few devices. Business analytics are used by MasterCard firms to prevent phony account activity.



Data Analytics Lifecycle



The data analytic lifecycle is intended for use with data science initiatives and Big Data issues. The cycle reflects a real project by being iterative. A step-by-step methodology is required arrange the actions and tasks involved with gathering, processing, analyzing, and repurposing data in order to fulfill the particular requirements for doing analysis on Big Data.

"Without big data analytics,
companies are blind and deaf, wandering
out onto the web like deer on
a freeway."

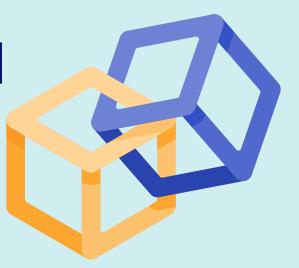
- Geoffrey Moore

- Geoffrey Moore American Management Consultant and Author



BLOCKCHAIN

THE EMERGING FUTURE OF THE TECH INDUSTRY



What Is Blockchain Technology?

Blockchain technology is a framework for storing public transactional records (sometimes referred to as "blocks") across multiple databases in a network connected by peer-to-peer nodes. This kind of data storage is frequently referred to as a "digital ledger."

Every transaction in this ledger is validated and protected against fraud by the owner's digital signature, which also serves to authenticate the transaction. As a result, the data in the digital ledger is quite safe.

Why is Blockchain Popular?

In terms of technology, Blockchain is a digital ledger that has recently attracted a lot of interest. But why has it gained such a following? So let's investigate it to fully understand the idea.

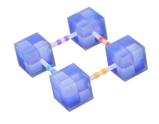
Consider sending money from your bank account to your relatives or friends. By utilizing their account number, you would connect to online banking and transfer the money to the other individual. Your bank updates the transaction records after the transaction is complete. It seems to be fairly easy, right? A potential problem exists, but most of us ignore it.

These kinds of transactions are easily manipulated. People who are aware of this truth are frequently reluctant to use these kinds of transactions, which is why third-party payment programs have developed over the past few years. But the main motivation behind the development of Blockchain technology was this weakness.

Data and transaction recording is an essential component of business. It takes time, money, or both for the business when this information is handled internally or passed through a third party like brokers, bankers, or lawyers. Fortunately, Blockchain eliminates this drawn-out procedure and enables the transaction to move more quickly, saving both time and money.

Advantages OF BLOCKCHAIN



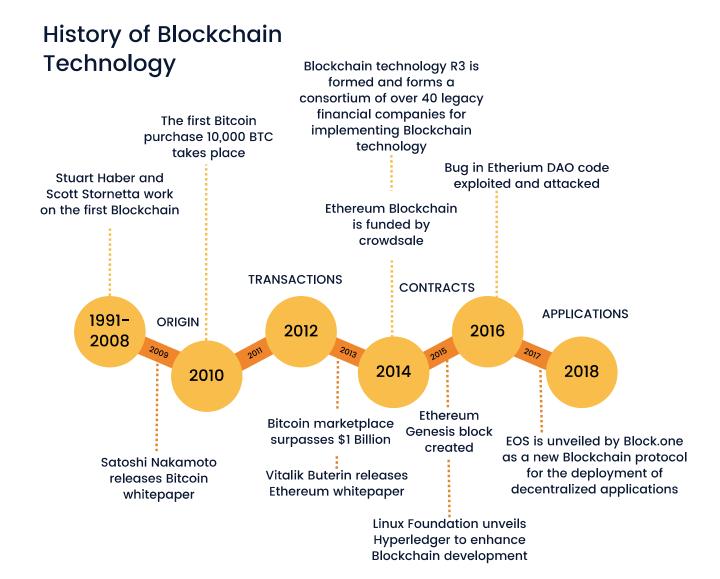




Highly Secure

Decentralized System

Automation Capability



Types of Blockchain

Private Blockchain Networks

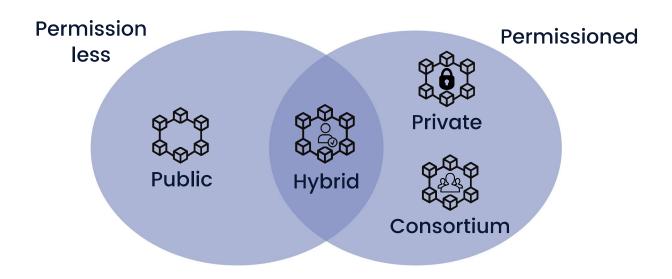
On closed networks, private blockchains function well for private corporations and organizations. Private blockchains allow businesses to set network characteristics, accessibility and permission choices, and other crucial security features. A private blockchain network is controlled by a single authority.

Public Blockchain Networks

Public blockchains, which were the source of Bitcoin and other cryptocurrencies, also helped spread awareness of distributed ledger technology (DLT). Public blockchains also aid in removing some difficulties and problems, including as centralization and security weaknesses. Instead of being kept in one place, data is spread throughout a peer-to-peer network using DLT. The legitimacy of information is verified by a consensus algorithm; proof of stake (PoS) and proof of work (PoW) are two popular consensus techniques.

Permissioned Blockchain Networks

Permissioned blockchain networks sometimes referred to as hybrid blockchains, are private blockchains that grant approved users exclusive access. These kinds of blockchains are frequently set up by businesses in order to achieve the best of both worlds. They provide better structure when determining who can join the network and in what transactions.



Consortium Blockchains

Similar to permissioned blockchains, consortium blockchains feature both public and private components; however, a single consortium blockchain network will be managed by numerous companies. Though initially more difficult to set up, these blockchains can provide superior security once they are operational. Consortia blockchains are also the best for working with various organisations.



Shaikh Arman (SY CSE)



ORACLE ACADEMY



To engage students in computing, educators need rigorous, robust resources that spark curiosity and imagination while teaching critical knowledge and skills.

Oracle Academy offers educators engaging curriculum using industry-relevant technologies that help students along the pathway in their educations or careers. The curriculum created by professional educators offers learning pathways spanning from one semester to three years, and helps learners expand knowledge, develop skills, and innovate.

Oracle Academy curriculum provides students with foundational computing knowledge and skills that are universally in high demand across computing jobs.





Java Curriculum

To help students advance object-oriented programming skills in Java, Oracle Academy offers Java Fundamentals, Java Foundations and Java Programming curriculum, designed for secondary and post-secondary learners.

Students are introduced to programming concepts, object-oriented concepts, terminology, and syntax, and the steps required to create basic Java programs in Java fundamentals and Java Foundations course.

For students who wish to extend their programming experience in Java and develop more complex Java applications, the course Java Programming is a suitable one.

Artificial Intelligence with Machine Learning in Java is suited for more advanced students who have gained fundamental knowledge of object-oriented concepts, data structures, recursion, and Java terminology and syntax from those previous courses.

With Oracle Academy curriculum, students engage in hands-on learning in Java and also develop problem-solving, collaboration, and critical-thinking skills to help them advance in computing across industries.





Database Curriculum

Students with little database experience learn database design techniques, design databases using a modeling tool, and are introduced to SQL to implement and query databases using hands-on, engaging activities in Database Foundations.

Students learn to analyze complex business scenarios to develop data models and learn to implement and perform advanced queries on databases using SQL in hands-on, engaging activities in Database design and programming with SQL.

Students are introduced to PL/SQL and explore how it extends and automates SQL in administering the Oracle database, and create projects to design, implement, and demonstrate a database solution for a business in Programming with PL/SQL.

The knowledge and practical skills students gain will help them advance their academic studies in computer science or enter the job market across industries and be ready to become innovators and leaders.





Compiled by
Ms. V.Kala,
Associate professor,
Department of CSE.

ORACLE ACADEMY

STUDENT'S REVIEW



Vaishnav Patange (SY CSE)

Oracle Academy advances computer science education globally to drive knowledge, innovation, skills development, and diversity in technology fields. I had used the oracle academy to get certified in Java as beginner. Which helped me a lot in my academics And the materials are quite focused & substantial enough to get you the work done. I would say Oracle Academy is a very good platform for online learning for free.

I would like to thank Prof. V. Kala Mam (Coordinator Oracle Academy) for guiding us and making available such courses to enhance our knowledge also Dr. Smita Kasar Mam (Head, CSE Department) Maharashtra Institute of Technology, Aurangabad.





G.S. Mandal's MAHARASHTRA INSTITUTE OF TECHNOLOGY, AURANGABAD (An Autonomous Institute)

AICTE Approved | Permanently Affiliated to Dr. Babasaheb Ambedkar Marathwada University
Accredited with Grade 'A' By NAAC



Cloud computing is the on-demand, pay-as-you-go supply of IT services via the Internet. Instead of acquiring, leasing, and maintaining data centers and servers, you can rent computing power, storage, and databases from a cloud provider like Amazon Web Services on an asneeded basis (AWS).

AWS provides a comprehensive suite of services and solutions to run sophisticated and scalable applications to help achieve better business outcomes. Running your applications in the AWS Cloud can help you move faster, operate more securely, and save substantial costs; all while benefitting from the agility, scale and performance of the cloud.





AWS Classroom Training provides live sessions conducted by instructors that educate you in-demand cloud skills and industry standards through it with a combination of presentations, discussion, and hands-on laboratories. In person, you may ask questions, work through ideas, and receive feedback from Amazon web services instructors with extensive technical knowledge.

Remote access training for your program allows students to study together and enhance their cloud skills at the same time.

AWS-authorized learning content is offered to institutions, allowing them to provide current AWS cloud computing curriculum to their students.



Dr. B. S. Sonwane (Co-coordinator AWS Academy)



STUDENT'S REVIEW



Pratik Khodwe (SY-CSE)

The AWS is nothing but a cloud service provider by Amazon. It's a revolutionary change because it allows you to develop an application without worrying about hardware, network, database and other physical infrastructure you need to run your application. The Revolution in IT industry are enhanced the job opportunities in the industry. The AWS academy is the best way to enhance your cloud computing knowledge.

I would like to thank Prof. Dr. B. S. Sonwane sir (Coordinator AWS Academy) for mentoring us to enhance our skill set also to Dr. Smita Kasar Mam (Head of CSE department) Maharashtra Institute of Technology Aurangabad.



CODECH#F <MITA> CHAPTER



CodeChef MITA Chapter established on: 31st October 2020

Establishment Purpose:

To build a coding committee that endeavors and excels in Competitive Programming to increase exposure and better job opportunities.

Current CodeChef MITA Chapter Team:

Faculty Advisor: Mr. Kiran Khandarkar

CodeChef MITA Chapter Team Leaders:

- President (Mr. Govind Khedkar)
- Competitive Programming Lead (Ms. Tejaswini Patil)
- Events Lead (Ms. Nikita Patwa)

CodeChef MITA Chapter Executive Members:

- CP Executive Member (Ms. Vaishnavi Nighvekar)
- O&M Executive Member (Mr. Tejas Badone)
- O&M Executive Member (Ms. Shubhangi Gadhave)
- CP Executive Member (Mr. Abhishek Dahihande)

Events Conducted:

- First Smarter Move
- Smarter Move 2.0





Congratulations!







भ्रष्टाचार

अध्यातमिक रीतीने जग पुढे जाते, सोबत भ्रष्टाचार वाढत राहतो , जगाच्या चालू घडामोडीत , गुणांचा मात्र विसर पडतो ।।१।।

हकदार व्यक्तीला नेहमी, तडजोडीची साथ, असक्षमतेला समोर नेण्यात, भ्रष्टाचाराचा हाथ ।।२।।

विज्ञानाद्वारे प्रगती होऊन, देश पुढे चालत राहतो, मात्र "भ्रष्टाचार" हा शब्द ही, जग नष्ट करतो ।।३।।

प्राण पणाला लावून माणसाने, दीर्घ यश गाठले, पण भ्रष्टाचाराला वाव देऊन, त्याने स्वतःचे आयुष्य घालवले ।।४।।

नेते गिरी करण्यात माणूस, खूप झाला सफल, भ्रष्टाचाराच्या संगतीनेच तर, त्याला आली खूप अक्कल ।।५।।

पण आता पळवून लावा, भ्रष्टाचाराचा भस्मासुर, नाहीतर आयुष्य होईल, आपलया पासूनच दूर ।।६।।

Sakshi Mghade





हस रे पाखरा हस, थोडा वेळ स्वतः साठी बस असेल एखादा छंद, होऊन जा त्यामध्ये धुंद

भर पंखात बळ, नक्की मिळेल फळ असु दे एकच ध्यानी, उडायचे आहे उंच गगनी

हरल्याची नको ठेवू खंत, लढाईला नाही आता अंत नको वाढवू मनात जंत, नक्कीच होशील तु विजयवंत

ठेव ध्येयाचा मान, उड्डाणाचे घे आव्हान आडवे जरी आले तुफान, उडव त्याची दाणादाण

> हस रे पाखरा, हस रे पाखरा तुलाही मिळेल सोन्याचा पिंजरा लवकरच होईल विजयाचा दसरा

Profik Khodwe SY CSE

धरत्रीच्या कुशीमधुनी एक कोंब अंकुरला•••

धरत्रीच्या कुशीमधुनी एक कोंब अंकुरला. उन्हं वार्याचा मारा घेत ताठ मानेने उभा राहिला त्याच्या उगमाचा सर्वांनाच हेवा वाटला बधाई देण्यासाठी सारा अवकाश चांदणे शिंपित आला जोडीला मामा म्हणून चंद्रालाही घेऊन आला सार्या विश्वामध्ये एकच जल्लोष पसरला याचा नाद दाही दिशांनी घुमू लागला कारण फक्त एकच धरत्रीच्या कुशीमधुनी एक कोंब अंकुरला. झाडे-वेली , पक्षु-पक्षी, डोंगर, नदी-नाले, पर्वत, समुन्द्रही मागे न राहिला धरत्रीच्या अंगनामध्ये सार्यांनीच खेळ मांडला या खेळामध्ये असा काही नाद घुमला मैत्रीच्या धाग्यांमध्ये कायमचा अडकून पडला सूर्यदेव मात्र लांबूनच आशिर्वाद देत राहिला धरत्रीच्या कुशीमधुनी एक कोंब अंकुरला....



TY CSE

माझी आई

कोन्ही कितीही बोलूद्या, समजून घेणारी वेळ प्रसंगी लढणारी अशी आहे माझी आई

कधी केला नाही तिने दागदागिन्यांचा हेवा काचेच्या बांगड्यातच मानला तिने तिचा गोडवा

ताजी भाकरी आम्हा भावंडाना द्यायची स्वतः मात्र शिळी खायायची आम्हा साठी जोडे आणून देणारी स्वतः मात्र बिना जोड्याची चालायची

अरे किती केले असतील तिने कष्ट दोन घास मिळवण्यासाठी, मला शिकवण्यासाठी अनुभवले आहे ते मी स्पष्ट अशी आहे माझी आई माझ्या कुटुंबासाठी

मला चांगला नागरिक आणि उच्च पदावर बघण्यासाठी किती केले असतील नवस आणि उपवास तिचे स्वप्न पूर्ण होई पर्यंत थांबणार नाही मी माझा प्रवास

अशी आहे माझी आई माझ्या कुटुंबासाठी

Shirnarayan Telangre sy cse

माय मराठी!



माय मराठी, तुझिया पायी तन मन धन मी वाहियले, तुझिया नामी, तुझिया पायी अखंड रंगुनी राहियले

कष्टामधली तुझीच गोडी चाखायची मज आई, मला आवडे तुझा विसावा, तुझीच निर्भर अंगाई, तुझे झरे अन तुझी पाखरे, वास तुझा जनलोक, हवाहवासा मला वाटतो राग तुझा, संतोष तुझा

तुझे चालणे, तुझे बोलणे, दाखव मजला रीत तुझी, जे ओळी ओठी ते पोटी असली, शिकवी मजला प्रीत तुझी,

तुझियासाठी गुंफीत बसले मोहनमाला शब्दांची, अर्थ साजरा, गंध लाजरा, नवलपरी पण रंगांची

माय मराठी तुझियासाठी वात होऊनि जळते मी, क्षणाक्षणाने कणाकणाने तुझ्या स्वरूपात मिळते मी



Sarika Dongre

TY CSE



DRAWING, SKETCHES, &

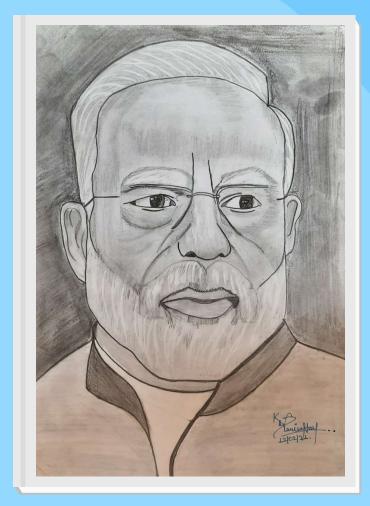


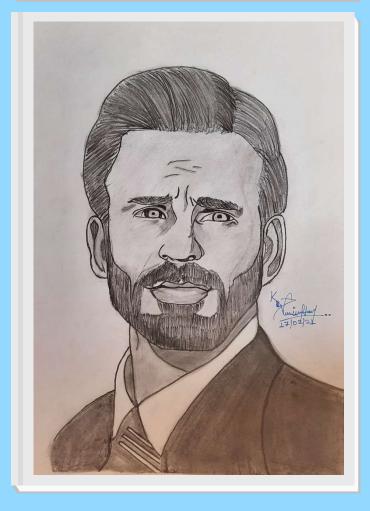




VAIBHAV KHARAT (SY CSE)





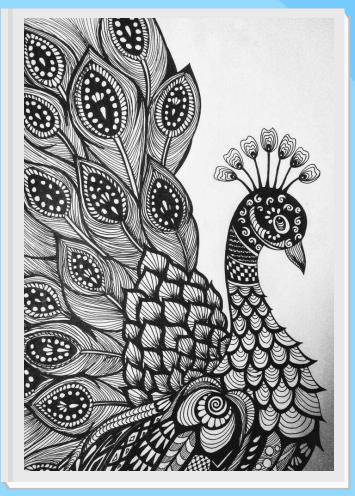






RUNALI PATIL (SY CSE)







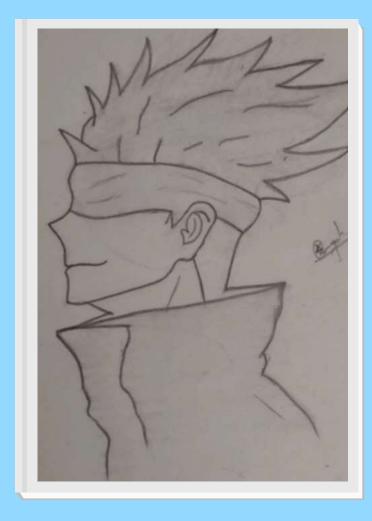




AKSHAY SHRIMANGALE (SY CSE)







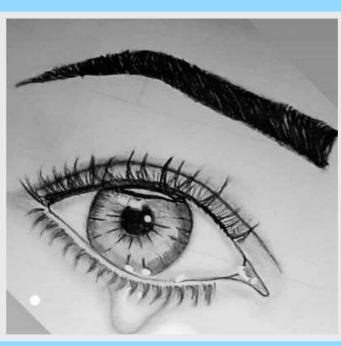




KEDAR PARALKAR (SY CSE)



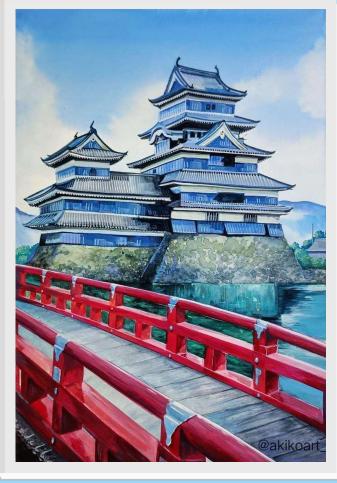


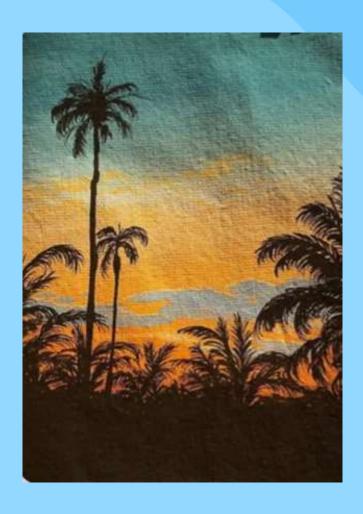


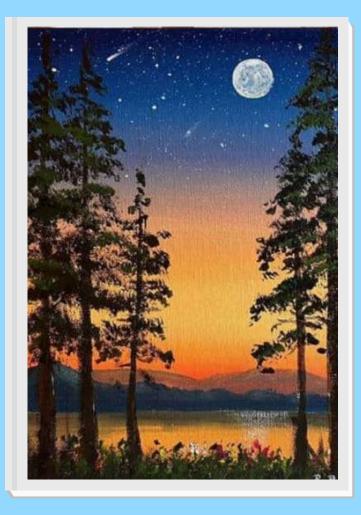




SAKSHI LAHANE (SY CSE)











KEDAR PARALKAR (SY CSE)













AKANKSHA TOTEWAD (SY CSE)



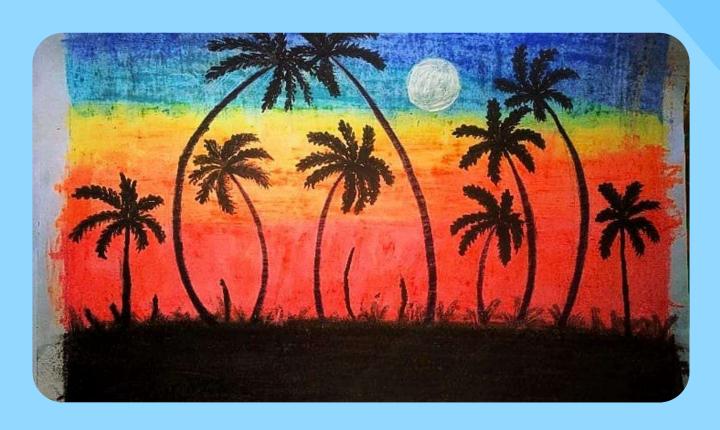




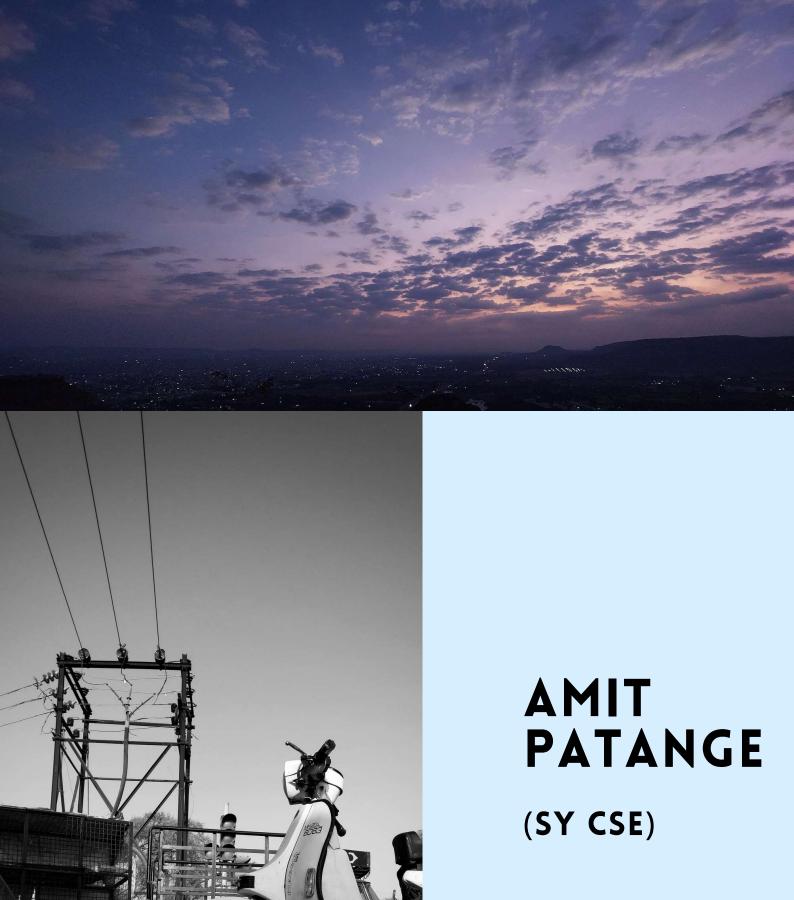


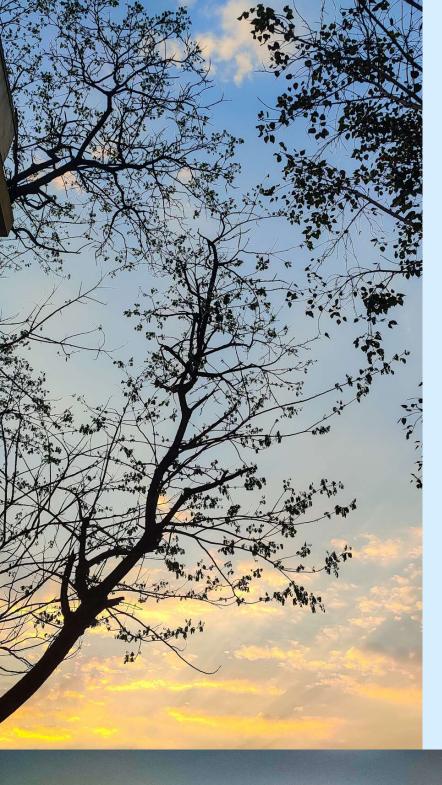


SHRUTI GOVINDALWAR (B.TECH CSE)



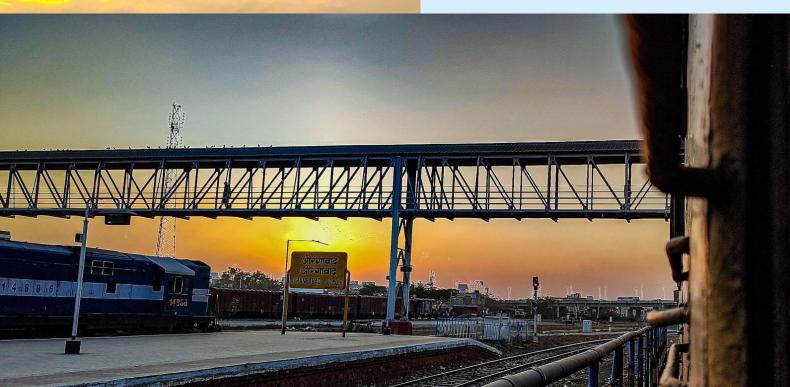




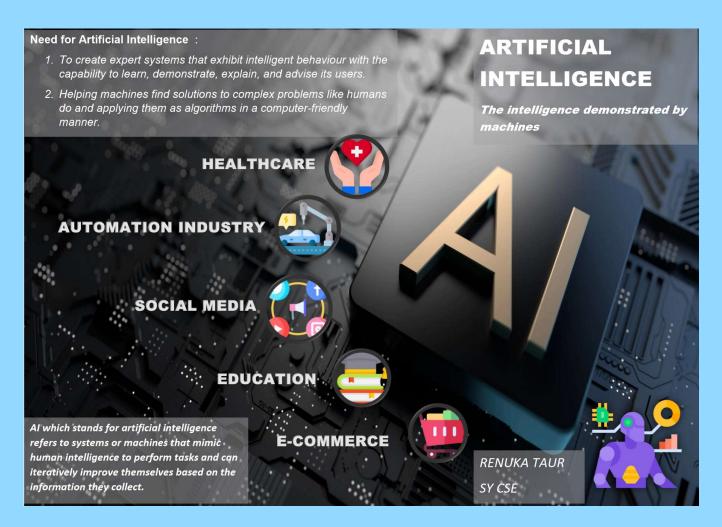


SANIKA PARIHAR

(SY CSE)







Renuka Taur



Mayank Patle



Internet Of Things



Connecting Prediction to Production



Powering a State that Works

communication is everything



Shopping Online





Robotic assisted surgery



IOT Smart home

Drone delivery















 The internet of things, or IoT, is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people.

Internet of Things. Think WiSmart

- They are provided with unique identifiers (<u>UIDs</u>) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.

Connecting the dots in the world

CREATE . CONNECT . COMMUNICATE | SMART LIGHTING MEETS IOT





Ms. Daivashala Deshmukh Assistant Professor CSED

Received certification – Oracle Certified foundation
Associate



Ms. Daivashala Deshmukh Assistant Professor CSED

Paper published on "Data Insertion methods in hive and visualization through Tableau" in International Conference on Innovations and Trends in Computing ICITC 2021 dated on 26 – 27 February 2021



Ms. Seema Chaudhary
Associate Professor CSED



STUDENTS ((((()))) ACHIEVEMENTS





New Horizon Institute of Technology and Management, Thane INDIAN OIL CORPORATION LTD. MSO MUMBAI



CERTIFICATE OF PARTICIPATION

This is to certify that Mr./Ms. MAYANK KRISHNAKUMAR PATLE

of MAHARASHTRA INSTITUTE OF TECHNOLOGY

has participated in the State Level Digital Research Poster Competition on "Smart Engineering Solutions for Cleaner India". The event was organised during 13 July to 31 July 2020 by the Department of Civil Engineering, New Horizon Institute of Technology and Management Thane in association with the Indian Oil Corporation Limited MSO Mumbai.

Dated-15 August 2020

Ms. Megha Thomas
COORDINATOR

Dr. P.P. Saklecha HOD CIVIL ENGG. S.D.Bobode

DEAN ACADEMICS

mary

Mr. P. K. Saklecha Dr. Prashant Deshmukh
DGM IOCL PRINCIPAL

Mayank Patle
TY CSE



Sakshi Tupe TY CSE



Shruti Govindalwar

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Concepts '22, an International Level Technical Symposium.				
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Maya Shelke TY CSE

Word from Alumni





ROMAN KAZI
Systems Engineer at TCS, Pune

Hi, My name is Roman Kazi. I graduated from MIT Aurangabad with Computer Science & Engineering as my major. Currently I'm working at TCS, Pune as Systems Engineer.

Four great years at MIT was an incredible experience. I'm thankful to the faculty and HOD CSE department for their constant support and encouragement throughout my journey.

Some advice I want to give to the students is to apply your learnings in creating projects regardless of how small they are, make sure you are building something. Participate in competitions, try to find your niche, not everyone will be good at everything, and this is one of the things that I love about Computer Science, there is something for everyone here and finally be humble you will soon realize there is so much to learn and explore in Computer Science







G.S. MANDAL'S

MAHARASHTRA INSTITUTE OF TECHNOLOGY, AURANGABAD

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

(AN AUTONOMOUS INSTITUTE)



KRUSHNA KADAM

MAHESH CHANDAK



ABHISHEK HOLE



PRIYA TANGDI



APURVA GOKHLE



MAYA SHELK



SHREGANESH HANGE



GANESH MASKE



TEJAS KEJARIWAL



HARISH PATIL

Batch 2021-2022

Congratulations!





G.S. MANDAL'S

MAHARASHTRA INSTITUTE OF TECHNOLOGY, AURANGABAD



Hearty Congratulations!! Placed at Hexaware



KUNIKA KULKARNI



MAHESH CHANDAK



AVADHUT MOKASHI

Batch 2021-2022

sugrafulations!









G.S. MANDAL'S

MAHARASHTRA INSTITUTE OF TECHNOLOGY, AURANGABAD

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

(AN AUTONOMOUS INSTITUTE)

Hearty Congratulations!!



SHUBHAM JADHAV Google

Ongrafulations!



Faculty Coordinator



Ms. Mrunal Mule

Assistant Professor

Team Leader



Priyanka Gupta (SY)

Editorial Team



Farhaan Ustad (SY)



Prachi Yadav (SY)

Logistics Team



Pawan Shahane (SY)



Kedar Paralkar (SY)

Creative Team



Runali Patil (SY)



Sakshi Lahane (SY)

