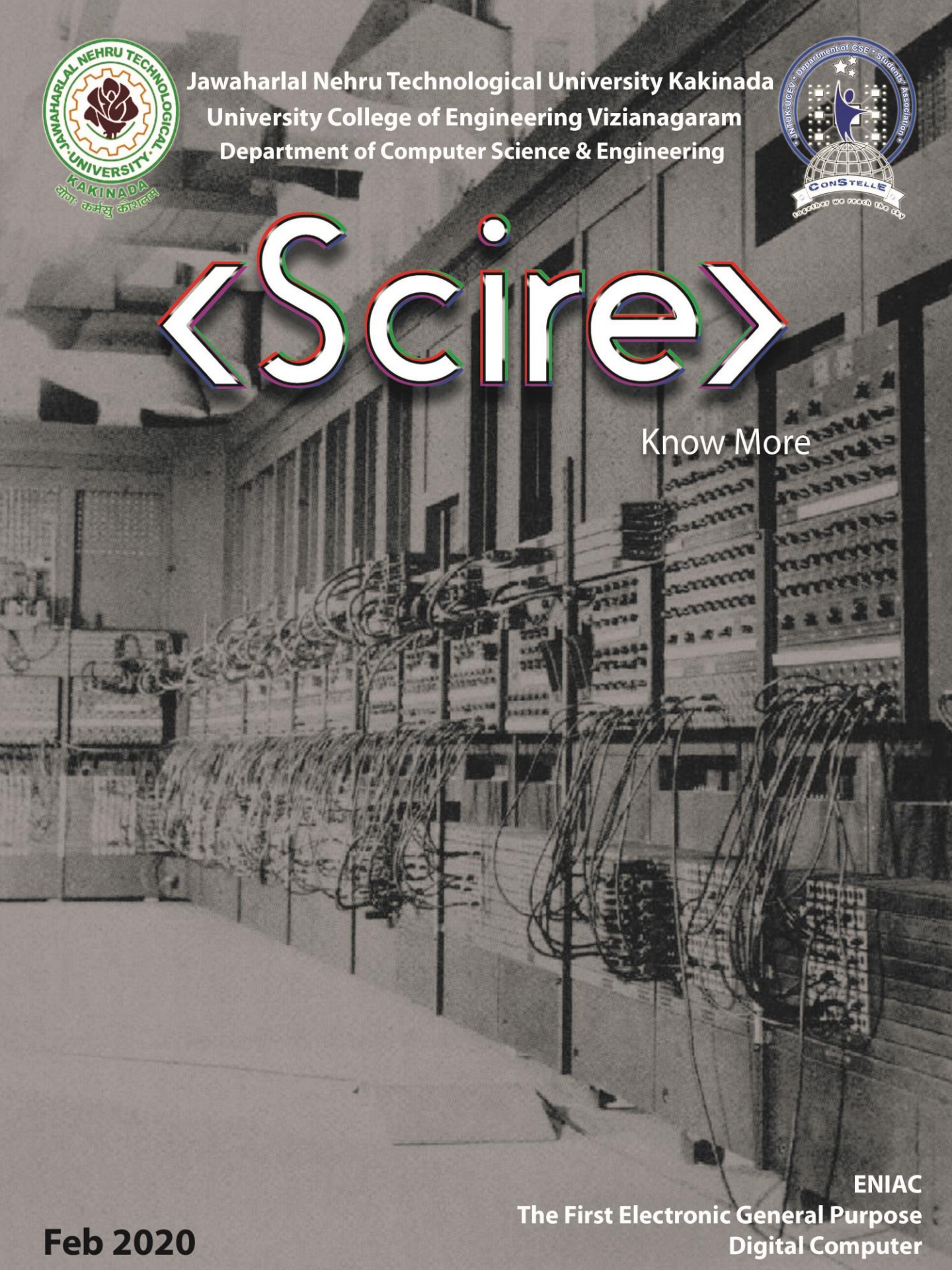
Jawaharlal Nehru Technological University Kakinada
University College of Engineering Vizianagaram
Department of Computer Science & Engineering

⟨Scire⟩

Know More



ENIAC
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Feb 2020

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JNTU college of engineering has always been striving to keep itself ahead of the competition and the results are now for everyone to see.
I'm extremely sanguine that the Department of Computer Science and Engineering has unlocked the store house of taken and creative genius and set buoyant human Spirit among the students through our Technical magazine "SCIRE" of this academic year 2020-2021.This is a productive technical material and hub for students to manifest their talents. Congratulations to the Head of the Department,magazine team and all the active participants for enlightening skills and being inspiration to other students.
I, as the principal on behalf of jntuv family welcome all the students and wish all the best to cse department for achieving greater success and scaling new heights in the coming session.

With Blessings and Warm wishes..
Prof. G. Swami Naidu
Principal

It is always pleasure to be a part of team which strives to bring out the talents of students into light.I'm happy to learn that the Department of CSE is coming out with the annual college magazine.Efforts such as this will provide an opportunity for students to show case their talents in technical writing, poetry writings, sketching and drawings among others.Such value additions are much essential for young technocrats and engineers.
I, sincerely appreciate the head of the department for encouraging every student to be a part of this magazine and congratulate the editorial team for their unrelenting efforts incompiling this magazine.

Happy Reading !
Prof. R. Rajeswara Rao
Vice-Principal

I am delighted to bring out this message. For our department magazine"SCIRE" released for the academic year 2020-2021.Education is not an act of acquiring knowledge but learning a skill to lead life and forming one's personality.This is an enobbling process of growth. I can boldly say that we have excelled in every initiative we under took and stood together.I thank all the students for providing readers with vibrant drawings,mind-scintillating poems and updates of current trends and also congratulate student and staff coordinators who have made untiring efforts to bring out this magazine.

I wish them all the success...
Prof. A. S. N. Chakravarthy
Head of the Department - CSE

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Vision of the Department

• To achieve academic excellence in Computer Science and Engineering by imparting comprehensive knowledge to the students, promoting research activities and professional ethics to outfit the ever changing industrial demands and societal needs.

Mission of the Department

1. To produce the best quality Computer Science professionals by imparting quality teaching and learning process, training and value education.

2.To strengthen links with industry through partnerships and collaborative developmental works.

3.To attain self-sustainability and overall development through Research and Consultancy activities.

4.To inculcate work ethics and commitment in students for their future endeavors to serve the society.

Contents

01 Life : A Game of Chess

03 Best Intelligent Apps

05 Cyber Crimes

07 Industry 4.0

09 An Introduction to Data Science

11 Federate Learning

12 5G Technology

13 Visual Positioning System

15 Cyber Security Tips and Tricks

17 Wi - Fi 6

18 Cloud Computing

19 Tech News

20 A Happy Life may not be a Meaningful Life

21 మన సాహిత్యం

22 Art Gallery

DEPARTMENT BREAKTHROUGHS

Prof. R. Rajeswara Rao appointed as the Vice-Principal of JNTUK-UCEV.

Prof. A. S. N. Chakravarthy received "Uttam Acharya (Best Faculty) Award" conferred by Indian Servers in association with Lions Club International, Telangana IT Association and Information Technology Companies Association of Andhra Pradesh.

Prof. R. Rajeswara Rao received Post Doc. From University of Missouri, Columbia, USA.

Department of CSE Board of Studies Meeting.

One Day Workshop on Ed-Tech Tools in Teaching & Learning.

Inauguration of CSI Student Branch.

A Two-Day Workshop on Android App Development by Swecha.

Invited Talk on "Memory as we know it,and what lies beyond!" by Dr. Venkata Kalyan Tavva,IIT Ropar.

Mr. T .Siva Rama Krishna Received Innovative Teacher of the Year award from Sri Mahamood Ali,Home Minister of Telangana and Sri Jagadeesh Reddy, Minister of Energy at ITAP Awards 2019.

STARS OF THE YEAR

5 students from 2019 passed out batch received Dr. APJ Abdul Kalam Vidya Puraskaralu.

Mr.Sk.Riyaz selected for Inter-University Chess Championship Team.

Ms.Harichandana received Prathibha award.

Ms.B.Vedasree received Academic Topper (II year) medal during Annual Day celebrations 2019.

CSE Men's Chess team won 1st position in Annual Sports and Games 2018-19.

CSE Girls Kho-Kho team won 2nd prize in 71st Republic Day celebrations.

Life: A Game of Chess

Life is one big chessboard,people are the chess pieces.

Chess is a strategy board game where all pieces on the board can move in different positions and each with different limitations. All pieces on the chessboard are moved to strategically over power the opponent's King and this is how the players ultimately win the game.

Chess, the game of life, is a game where every decision made has an impact on the rest of your game.one bad move and your entire game is ruined or in the least, it makes it hard to recover from the bad choice.
Each chess game consists of 32 initial pieces.
(These pieces make up the human population)

- 2 Kings
- 2 Queens
- 4 Rooks (Castles)
- 4 Knights
- 4 Bishops
- 16 pawns

It's clear to see that not all pieces on the board of life are placed equally in the hierarchy of life:

- The few elite.
- The powerful reinforcements.
- The free spirits.
- The majority – dedicated hard workers.

Some, at first, appear to be lucky to have already been placed in positions of power. Others have to work hard if they have any hopes of "moving up" in life.
"Life is one big chess board. All the pieces represent each type of person in this world……"

The King
These are the all-powerful influencers and the decision makers. they don't move around much, but they have a huge following. they are very well protected by all the other pieces and at all costs. All the other players have to move in the interest of these all powerful human chess pieces. Interesting thing with these all powerful pieces are that even with all their power, if the 'kings' in life do not have substancial backup from those around him, they are almost useless.
Presidents, Celebrities, Royalty, Corporate CEOs ,etc.

The Queen
The most powerful piece of all, with unmatched freedom of movement .with all this power though, try as she might, the Queen will always only be second to the king. The Queen has a lot of influence but if she is not careful, she may easily be replaced by an upcoming pawn. As with the King,powerful as the Queen may be, she is almost useless without the support of the other pieces on the board.
Experts, Managers, Directors of big corporations, Heads of different governmental sectors, etc.

The Bishop

These players remain on their own colour. These 'pieces' avoid change at all costs and prefer to remain in their comfort zones. these pieces are crucial to the king's success and often serve as loyal Devotees.

Conservative or traditional people that generally try sticking to rigid regime,etc.

The Knights

These players represent those that love freedom! They move around the world with their head and their heart. They are the motivators of the world. These are the pieces that encourage change. Their free-spirited capabilities are so unique that not even the Queen can perform these moves.

Nelson Mandela, Priests, Freedom fighters, Activists, Philosophers, Positive Thinkers, etc.

The Rook (Castle)

These are the tall, head-strong and powerful ones. Their almost intimidating power is often used to fight off the bad and protect all the other pieces on the board. These pieces provide support to the rest of the pieces on the board.

Army, Police force, Firefighters, etc.

Pawns

The workers. The most over looked, yet most crucial pieces in the game of life. Without the pawns, the higher powers would be weak, vulnerable. The all-powerful often use these pieces for their own gain. The pawn remains headstrong and looks ahead, knowing that if they work hard enough they will get rewarded and move well up the ladder.Sometimes, the pawn becomes so fixated on moving up, that they lose their self in the prcess……

Construction workers, Teachers, Doctors, etc.

Many of us fall into this category…

In this game of life you cannot just focus on your next move, but rather, you have to focus on your next three moves. The next move you make has an impact on the moves you're allowed to and will be forced to make in the future.Every decision you make today will have an impact on your future decisions tomorrow, regardless of where you fit in this game of life.

sometimes we make decisions fully believing that it was our best decision and ends up being the worst decision we could have made. What's important though is how fast we are willing to get back up and start again. Each piece has to keep moving. Mistakes are made and learnt from.

Such is the game of life.

Mr. Sk. Riyaz

IV CSE

Best Intelligent Apps

We are living in a digital era that has made it possible for the innovation and technologies to work up with the future of the world. Even artificial intelligence programming has taken a new height with the involvement of technology to guarantee the success of the business world. In the fast-moving world, the aspects have turned out to be a bigger success to ensure that infinite advantages are gained.

There area plethora of applications in the market that has embarked towards a journey while seeking information. This also includes machine learning and cloud infrastructure as a plus point that has made it advanced to work around.

Intelligent Applications

The term intelligent application is mainly derived in the form of historical data and real-time workflow. This volume of data is acquired from several sources including user interactions that have made it possible to make predictions and offer suggestions. The users get relevant information and deliver contextual flow with machine learning, data analytics,and user experience. It includes AI in software development that has the abilityto work for users with smart algorithms.

Working Intelligent Applications

The mobile-enabled access has made it possible for a business to work in a data-oriented manner with the help of key points. Even the digital natives have achieved popularity to work enrich and enhance user experience. This can be offered with the help of intelligent applications that can be obtained with the help of data. There are different ways to work to accomplish the employee's requirement.

• The context-sensitive and personalized information work intelligently with custom web development services. It also helps in streamlining and filtering up the overall data process to ensure that the decision making process is done appropriately,
• Even the software development services automate processing to ignore complex problems that contribute to boost response time and enhance output.
• Intelligent applications work well with a mobile workforce to enhance right information in an effective manner.

Different Intelligent Application

There are different intelligent applications that are famous in terms of iOS and Android development.

There are different features that are used in terms of Window operating system. However, now this intelligent application,Cortana has moved towards Android as well that gets the topmost-scope. The artificial intelligence programming is also included in the system that works in real-time. One can easily rely on Cortana to handle work and schedule a meeting to make the overall work process easy.

The artificial intelligence,Recent News work amazingly well with the different application including recent news. This algorithm works well in examining the reading habits and ensuring that the latest blogs, news, articles, etc. are to the mark. It requires deep AI in software development that can easily check out the facts and ensure that interest of users is matched. The application synchronization is also kept in mind to ensure that data is not left behind aiding to success.

Another application, Google Allo that has gained a lot of popularity over time with artificial intelligence is Google Allo. This application is best for those who hate to type regularly and are lazy to do it. To overcome this, there are applications that can work on your behalf and has multiple features. This allows users to add events, put up a reminder and every work as per question answer.

The custom web development services also workaround similar to Google Voice Search. It also includes an instant display and natural speaking to get proper results. There are different results added to the features such as changing music with voice. The application can work around weather condition and alarm setup as well. This also includes different information to make the whole web process easy to make calculations.

This has managed to speed up the whole application game to go a bit higher while enhancing workforce efficiency, decision making, long term gains, better business results, etc. It has managed to focus with the right manner to get a competitive edge in the market. The software development services can help in taking intelligent services and decision.

Ms. D. Vasudha
I CSE

Cyber Crimes

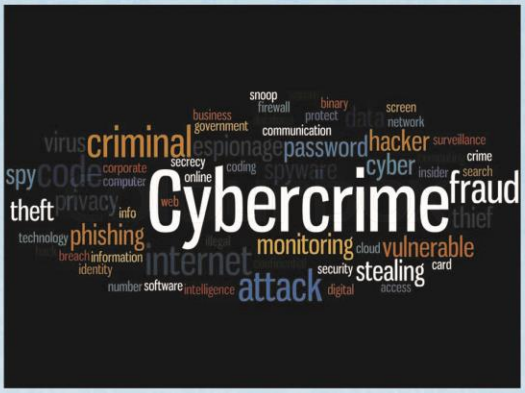
Cyber crimes:

Cybercrime is any criminal activity that involves a computer, networked device or a network.It also called computer crime, the use of a computer as an instrument to further illegal ends, such as committing fraud, trafficking in child pornography and intellectual property, stealing identities, or violating privacy. Cybercrime, especially through the Internet, has grown in importance as the computer has become central to commerce, entertainment, and government.

Types of cyber crimes:

Cybercrime ranges across a spectrum of activities. At one end are crimes that involve fundamental breaches of personal or corporate privacy, such as assaults on the integrity of information held in digital depositories and the use of illegally obtained digital information to blackmail a firm or individual. Also at this end of the spectrum is the growing crime of identity theft. Midway along the spectrum lie transaction-based crimes such as fraud, trafficking in child pornography, digital piracy, money laundering, and counterfeiting. These are specific crimes with specific victims, but the criminal hides in the relative anonymity provided by the Internet.

Another part of this type of crime involves individuals within corporations or government bureaucracies deliberately altering data for either profit or political objectives. At the other end of the spectrum are those crimes that involve attempts to disrupt the actual workings of the Internet. These range from spam, hacking, and denial of service attacks against specific sites to acts of cyberterrorism—that is, the use of the Internet to cause public disturbances and even death. Cyberterrorism focuses upon the use of the Internet by nonstate actors to affect a nation's economic and technological infrastructure.



When coming to Economy, Cybercrime has its own economy that takes place on the dark web, which is different from the deep web. Criminals buy and sell malware, botnets, data lists and more to commit fraud and identity theft.The dark web is used for sex trafficking, distribution of child pornography, hitmen and much more. There's a corner of the internet, hidden by multiple redirects and encrypted pages, that opens up those horrible crimes. We're calling it the "cybercrime economy."

While it may not be possible to completely eradicate cybercrime and ensure complete internet security, businesses can reduce their exposure to it by maintaining an effective cybersecurity strategy using a defense-in-depth approach to securing systems, networks and data.some of them are:develop clear policies and procedures for the business and employees;create cybersecurity incident response management plans to support these policies and procedures;outline the security measures that are in place about how to protect systems and corporate data;use two-factor authentication (2FA) apps or physical security keys;activate 2FA on every online account when possible;verbally verify the authenticity of requests to send money by talking to a financial manager;create intrusion detection system (IDS) rules that flag emails with extensions similar to company emails;carefully scrutinize all email requests for transfer of funds to determine if the requests are out of the ordinary;continually train employees on cybersecurity policies and procedures and what to do in the event of security breaches;keep websites, endpoint devices and systems current with all software release updates or patches; andback up data and information regularly to reduce the damage in case of a ransomware attack or data breach.

Mr. Sk. Basheer
III CSE

INDUSTRY 4.0

Let's take a look into the history....

The First Industrial Revolution 1765:
At that time people witnessed massive extraction of coal along with the very important
invention of the steam engine that was the reason for the creation of a new type of energy that later on helped speed up the manufacturing of railroads thus accelerating the economy.

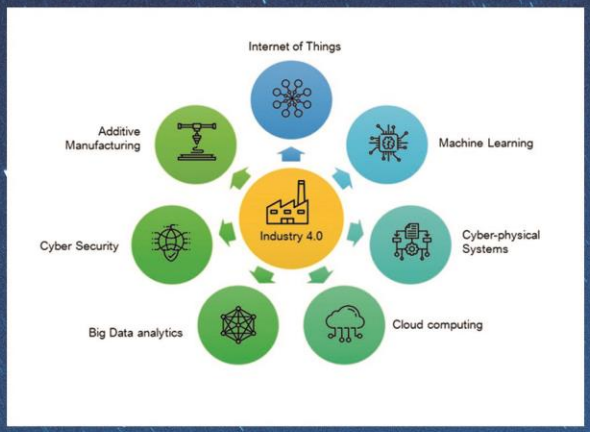
The Second Industrial Revolution 1870:
The result of this revolution was the creation of the internal combustion engine that started to reach its full potential. Other important points of the second industrial revolution was the development for steel demand, chemical synthesis and methods of communication such as the telegraph and the telephone.

The Third Industrial Revolution 1969:
The third revolution brought forth the rise of electronics, telecommunications and of course computers. Through the new technologies, the third industrial revolution opened the doors to space expeditions, research, and biotechnology.

The Industry 4.0

Industry 4.0 (or The Fourth Industrial Revolution) is a level up, a modern insurgency that connects people, processes and machines. It is a combination of IIoT (Industrial Internet of Things), cyber-physical systems and artificial intelligence, put together to ultimately make machines capable of making decisions with minimal human intervention. The Fourth Industrial Revolution will transform existing technologies and capabilities in the manufacturing and production industry. It is an amalgamation of traditional manufacturing practices and sophisticated technology; real-time visibility of the complete value chain, thus allowing for better decisions; and recalibration, which leads to greater efficiency and productivity.

Components of Industry 4.0



The Components of Industry 4.0 include:

- Mobile devices
- Internet of Things (IoT) platforms
- Location detection technologies
- Advanced human-machine interfaces
- Authentication and fraud detection
- 3D printing
- Smart sensors
- Big data analytics and advanced algorithms
- Multilevel customer interaction and customer profiling
- Augmented reality/ wearables

Industry 4.0 In India

According to Forbes India magazine, By 2023, the competitive advantage of business in all industries will be driven primarily by innovations developed in AI. Smart Advanced Manufacturing and Rapid Transformation Hub (SAMARTH) - Udyog Bharat 4.0 is an Industry 4.0 initiative of Department of Heavy Industry, Government of India under its scheme on Enhancement of Competitiveness in Indian Capital Goods Sector. The initiative aims to raise awareness about Industry 4.0 among the Indian manufacturing industry through demonstration centres. Currently there are four centres which include Center for Industry 4.0 (C4i4) Lab Pune; IITD-AIA Foundation for Smart Manufacturing; I4.0 India at IISc Factory R&D Platform; Smart Manufacturing Demo & Development Cell at Central Manufacturing Technology Institute (CMTI), Bengaluru.

Mr. I. Sajid Ali
III CSE

An Introduction to Data Science

We live in a world where vast amounts of data are collected daily.We should gather useful information from that data.

Data Science is a detailed study of the flow of information from the colossal amounts of data present in an organization's repository.

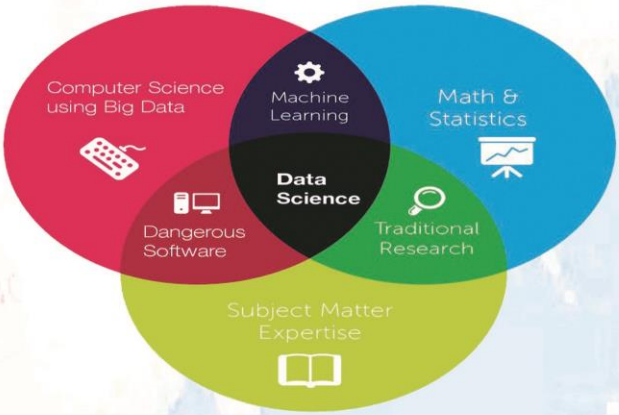
Data is the new oil.This statement shows how every modern IT system is driven by capturing,storing and analysing data for various needs.Be it about making decision for business,forecasting weather,studying protein structures inBiology or designing a marketing campaign all of these scenarios involve **Data Science.**

Data Science is an interdisciplinary field of scientific methods,processes,algorithms and systems to extract knowledge or insights from data invarious forms,either structured or unstructured,similar to data mining.It is the skill of unfolding the insights and trends that are hiding(or abstract) behind data.

As shown in the image,Data science includes Statistics, Machine Learning and Data Analytics.

Why Is Data Science Important ?

Data science has a tremendous impact across industries —from improving businesses' financial performance to understanding how millions of genetic pairs interact to creating the digital transformation of politics and campaigning.Today,data science is entering a newera,where information technology and the proliferation of data is changing the way that business and organizations operate.



By leveraging analytic capabilities, organizations can enhance processes,develop new products and services,and create more personalized interactions through the availability of large-scale data.With data science,the opportunity exists to use emerging technologies to extract valuable,complex, and varied information to develop strategies to maintain a competitive advantage Data Science brings together a lot of skills like statistics,mathematics,and business domain knowledge and helps an organization find ways to:

- Reduce costs
- Get into new markets
- Tap on different demographics
- Gauge the effectiveness of a marketing campaign
- Launch a new product or service

Data Scientist :

A person who analyses and interprets complex digital data,such as the usage statistics of a website,especially in order to assist a business in its decision-making is a Data Scientist.As you can see in the image,a Data Scientist is the master of all trades! He should be proficient in maths,he should be acing the Busines field,and should have great Computer Science skills as well.

Components of Data Science:
- Data
- Programming
- Statistics and Probability
- Machine Learning
- BigData

Some best free tools for Data Science are R,Python,SQL,Tidyverse,ggplot2,R Markdown,Shiny,MLR,Tensorflowetc.

Data Science Life Cycle:

Applications of Data Science :

Regardless of the industry vertical, Data Science is likely to play a key role in your organization's success.

1.Banking:

Banking is one of the biggest applications of Data Science.It provides them with several predictions that the business bank will derive through their customers.In case of fraud detection,banks allow the companies to detect frauds that involve a credit card, insurance, and accounting.Banks are also able to analyze investment patterns and cycles of customers and suggest you several offers that suit you accordingly.

2.Finance:

Financial industries need to automate risk analytics in order to carry out strategic decisions for the company.Using machine learning,they identify,monitor and prioritize the risks.These machine learning algorithms enhance cost efficiency and model sustainability through training on the massively available customer data.Similarly, financial institutions use machine learning for predictive analytics.It allows the companies to predict customer life time value and their stock market moves.

3.Manufacturing:

Data Science is being extensively used in manufacturing industries for optimizing production,reducing costs and boosting the profits.Furthermore,with the addition of technologies like the Internet of Things(IoT), data science has enabled the companies to predict potential problems,monitor systems and analyze the continuous stream of data.With a thorough analysis of customer reviews,data scientists can help the industries to make better decisions and improve the quality of their products.Another important aspect of data science in industries is Automation.

4.Transport:

In the transport sector,Data Science has actively increased its manifold with the introduction of self-driving cars.

5.Healthcare:

In the health-care industry,data science is making great leaps. The various industries in health-care making use of data science are
- Medical Image Analysis
- Genetics and Genomics
- Drug Discovery
- Predictive Modeling for Diagnosis
- Health bots or virtual assistants.

Ms. B. Jyothi Surya Sravanthi
III CSE

Federate Learning

In this whole article I want to give you full picture of why we need this latest techno called federate learning.

Nowadays, machine learning, as well as deep learning, has become a hot topic and attracts great attention from industry. Standard machine learning approaches require centralizing the training data on one machine or in a data-center. The core idea of machine learning and deep learning is to use large amounts of data to fit a model that can generalize well to unseen inputs. As the increase of data size and model complexity, it becomes harder for a single server to accomplish a machine learning task. Even though we have multiple servers to accomplish above problem, there are some problems like cost, deployment locations and sharing work among them. To address this problem, Federate learning was developed.

In recent years, mobile devices have gained increasingly development with stronger computation capability and larger storage. Some of the computation-intensive machine learning and deep learning tasks can now be run on mobile devices. Federate learning enables us to use this advantage to train the models on the selected mobile devices by make use of their computational resources and data in the mobile itself. For example Google uses this technology for Gkeyboard such as keyboard query suggestions and next word prediction.

One of the most important advantage is that this architecture cannot only relieve computation and storage burden on servers, but also protect the users sensitive information i.e. data privacy. In machine learning area, the training data stored on servers are mainly obtained from users uploads, which may include some of the users sensitive data, such as the input words. The leak of sensitivity information can bring security risks to users, but with the help of this federate learning we can protect the user privacy by bringing the model to the user.

Mr.B. Sathish Kumar Reddy
IV CSE

5G Technology

5G is the 5th generation mobile network. It is much better than previous networks 5G will elevate the mobile network to not only to interconnect people, but also to interconnect control machines, objects, and devices. It will deliver new levels of performance and efficiency that will empower new user experiences and connect new industries. 5G will deliver multi-Gbps peak rates, ultra-low latency, massive capacity, and more uniform user experience.5G is a platform for innovations that will not only enhances today's mobile broadband services, but will also expand mobile networks to support a vast diversity of devices and services and connect new industries with improved performance, efficiency, and cost. 5G will redefine a broad range of industries with connected services from retail to education, transportation to entertainment, and everything in between. We can use 5G as a technology as a transformative as the automobile and electricity.

As Per IMT-2020(international Mobile telecommunication) requirements, 5G is expected to deliver peak data rates up to 20 Gbps. Qualcomm Technologies' first 5G NR modem, the Qualcomm® Snapdragon™ X50 5G modem, is designed to achieve up to 5 Gbps in downlink peak data rate.

In addition to higher peak data rates, 5G will provide much more network capacity by expanding into new spectrum, such as millimeter wave (mmWave). 5G will also deliver much lower latency for a quicker immediate response, and an overall more uniform user experience so that the data rates stay consistently high even when users are moving around. Moreover, the new 5G NR (New Radio) mobile network will be backed up by Gigabit LTE coverage foundation, which will provide ubiquitous Gigabit-class connectivity.*5G is bringing a wide range of technology inventions in both the 5G NR (New Radio) air interface design as well as the 5G NextGen core network.Like 4G LTE, 5G is also OFDM-based and will operate based on the same mobile networking principles. However, the new 5G NR (New Radio) air interface will further enhance OFDM to deliver a much higher degree of flexibility and scalability.

5G will not only deliver faster, better mobile broadband services compared to 4G LTE, but it will also expand into new service areas, such as mission-critical communications and connecting the massive IoT. This is enabled by many new 5G NR air interface design techniques, such as a new self-contained TDD subframe design.

Ms. P. Sahithi Jyothsna
III CSE

Visual Positioning System

Have you heard about Google's new innovative Visual Positioning System that gave a novel look to the present maps navigation technology? This mind blowing update in the navigation world is creating a wave in life style of people all around the world.With this new technology, Google Maps can make use of the user's phone camera to spot your surroundings and visually converse your direction right in front of your eyes.

VPS-How It Works?

VPS uses Google's extensive back-end data and your device's camera to analyze the surroundings where you are in. The greater accuracy of the features makes it really easy for them to identify where you are.

• First of all, the button should be tapped to activate the visual view. Following, simply point your device's camera to the preferred destination to see the relevant info.

• The surroundings will be displayed with an overlay of Maps data for close by business and there will be arrows pointed in the direction where you have to go.

• You can also see a small map displayed on the bottom side which acts as a reminder for where you are headed.

• VPS retrieves its data from the surrounding buildings and landmarks where you are in rather than completely relying on satellite location that erases the possible flaws with GPS.

• Google even has plans to put a character on the particular screen to give users a feel of an augmented reality tour guide. In the demo, they tried the navigation experience with a small fox.

Key Benefits of VPS

When the standard GPS technology is not enough, this new visual system can offer you ample support to fix your navigation concerns.

Out of the many benefits, here let us have a look at a few of the main advantages that makes it a stand out.

• Despite if it is for a large public venue, school or a business establishment,VPS can be a great aid to the visually-impaired. The close-up visual assistance can be a life changing assistance to the visually-impaired to make their navigation a lot easy.

• The camera-enabled navigation system can be a real friend in case you get lost in busy intersections or at an unfamiliar locale. Just switch on the phone's camera and take the visual view and you are safe.

• VPS can help you to get better insights for your business, provide assistance for clients on foot and made available for all transportation methods.

• Being an icon in the navigation sector, Google is offering remarkable comfort and easiness for our travel from one spot to other with negligible dependency.

How VPS Can Augment the World?

• Giving less emphasis to satellites, VPS can in fact provide a cloud-based depot of robust image data captured from physical surroundings. Ad-hoc visual markers can determine outdoor and indoor locations and the scanned geo-located photos let you identify distinctive features such as signage, buildings, and walls.

• Augmented marketing is on its way as major brands around the world can capitalize on this data to create compelling marketing content. Customers can be easily navigated to their goods of choice with an improved AR experience.

How to Use VPS for Business?

When Visual Positioning System will get flourished worldwide, many sectors are going to get benefitted in some way or the other and business industry will be one major area. Let us see how.

• They can make use of the possibilities of the visual navigation system to help
customers to be in their front doors without many hassles.

• Filling out your Google business profile is the key as customers can see information about your business through Google's Visual Positioning System service.

Expected Drawbacks

Just like every other innovations in technology, you cannot expect a cent percent perfect outcome as soon as it rolls out in the market.- Google will be looking out for user experiences and feedbacks to make relevant changes or updates to make it close to perfection. However, in the first case itself, you can expect a few drawbacks. Let us have a look.

• Not to be a surprise, all indoor environment areas may not be appropriate for Visual Positioning System and there will be a lot of related issues to handle with at least in the first phase.

Conclusion

The exact time of availability of the technology in your hand phones is still to be announced. We are hoping that they will come with an update soon on that.

Moreover, by the time it gets rolled out into the world of technology, we can expect a few more additions or improvisations in the technology features making it more mind blowing. We have moved to an era from where we used to ask the people on the way to check if the navigation is correct to checking on the phone using GPS to confirm the route.

The innovations are opening a new world of navigation where your device visually communicates the route. This is giving clear hints that we can expect much more on the years to come.

G. Vahini Kumar
III CSE

Cyber Security Tips and Tricks

How to Track an Email ?

Email Tracking - Getnotify:

When we send an email, at times we want to know whether the message has been read by the intended recipient. This is needed when the law enforcement authorities need to prove in the Court of law that a particular email was read by the intended user. Google mail i.e, Google allows such a feature through services like "getnotify".

The tracking of email messages is done with the help of web beacon. A Web beacon is an often-transparent graphic image, usually no larger than 1 pixel x 1 pixel. It is placed in the sent email and often used in combination with cookies.

The web beacons besides tracking the opening of email messages, can also track other relevant information of the user including:

- User's IP address
- User's geographical location
- Whether message was viewed for a length of time or
- Whether the message was deleted right away

This service is completely free and does not necessarily require Gmail as the email provider. However, free account is limited to only five email messages per day.

What is the Procedure for Tracking?

- Create an account with the Get Notify website i.e, https://www.getnotify.com/signup/

The process requires the following details:

1 Email Address
2 First Name
3 Last Name
4 Password
5 Country
6 Time Zone

- Send email as usual, but add "getnotify.com" after each email recipient. E.g, instead of sending mail to a valid account like example@gmail.com,

• Get Notify server adds a web beacon to the mail intended for the target. When the email recipient opens the message, this beacon gets downloaded. Thus it enables Get Notify find the aforesaid mentioned information.

• Get Notify notifies the user about the "information gathered" through an email. Alternatively, the user can view the log files from the online account created at "getnotify.com".

• The web beacon inserted by the Get Notify servers and the term "getnotify.com" at the end of the email addresses, are both invisible to the target.

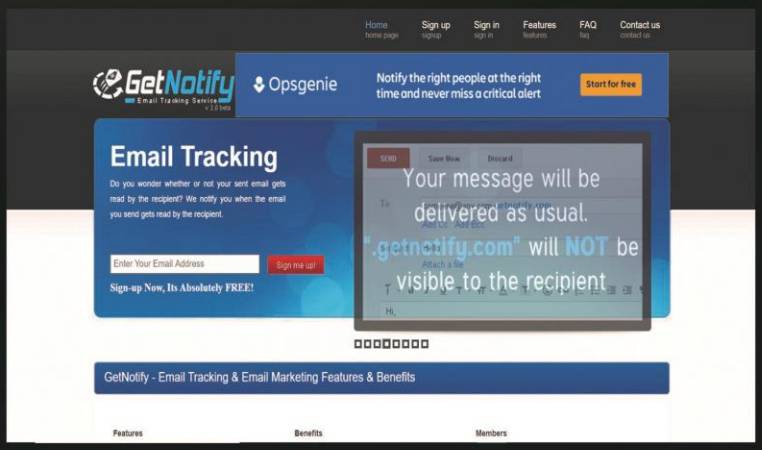
Optionally, the users after signing in to the website, can specify their own images to be used as tracking images by going to the preference section. If the user wants to send a single email to multiple targets, he/she should add "getnotify.com" at the end of every email-address.

Real Life Application:

• To guage the mood of the recipient : You send an email with attachment. In one case the mail is read again and again with attachments downloaded, and in other deleted right away. Both conveys a different mood and feeling of the recipient, isn't it? Hope you got the point!

• By Law Enforcement Agencies : Getnotify also provides the IP address of the recipient in albeit limited number of cases. So, it can provide the true location of the target/ suspect for investigative purposes.

• As Digital Evidence : In the Court of law, prosecution or defendant might need to prove that a particular message/ email was read. This tool helps prove it easily.



Wi - Fi 6

Wi-Fi 6 is the next generation standard in WiFi technology. Wi-Fi 6 also known as "AX WiFi" or "802.11ax WiFi" builds and improves on the current 802.11ac WiFi standard. Wi-Fi 6 was originally built in response to the growing number of devices in the world.If you own a VR device, multiple smart home devices, or simply have a large number of devices in your household, then a Wi-Fi 6 router might just be the best WiFi router for you. In this guide, we'll go over Wi-Fi 6 routers and break down how they're faster, increase efficiency, and are better at transferring data than previous generations.

Instead of boosting the speed for individual devices, Wi-Fi 6 is all about improving the network when a bunch of devices are connected.That's an important goal, and it arrives at an important time: when Wi-Fi 5 came out, the average US household had about five Wi-Fi devices in it. Now, homes have nine Wi-Fi devices on average, and various firms have predicted we'll hit 50 on average within several years.

Those added devices take a toll on your network. Your router can only communicate with so many devices at once, so the more gadgets demanding Wi-Fi, the more the network overall is going to slow down.Wi-Fi 6 introduces some new technologies to help mitigate the issues that come with putting dozens of Wi-Fi devices on a single network. It lets routers communicate with more devices at once, lets routers send data to multiple devices in the same broadcast, and lets Wi-Fi devices schedule check-ins with the router. Together, those features should keep connections strong even as more and more devices start demanding data.

Another new technology in Wi-Fi 6 allows devices to plan out communications with a router, reducing the amount of time they need to keep their antennas powered on to transmit and search for signals. That means less drain on batteries and improved battery life in turn.

This is all possible because of a feature called Target Wake Time, which lets routers schedule check-in times with devices.It isn't going to be helpful across the board, though. Your laptop needs constant internet access, so it's unlikely to make heavy use of this feature (except,perhaps, when it moves into a sleep state).The biggest beneficiary of these improvements will be crowded areas where either a couple of APs are serving too many client devices or there are just too many APs. Since WiFi 6 both enhances the number of devices an AP can handle at the same time and decreases connectivity drops and latency, it will improve your overall experience whenever you are in a public place like a concert or a mall or an airport.

WiFi 6 is also meant for the new world we are living in. We use tons of smart home devices in our homes. According to professional estimates, a single city home will be having around 50 client devices in the near future. The new WiFi 6 standard will ensure that all those devices are connected, receive data according to their requirement, and don't get in the way of each other.

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Cloud Computing

INTRODUCTION:

Cloud computing is a computing paradigm, where a large pool of systems are connected in private or public networks, to provide dynamically scalable infrastructure for application, data and file storage.

The idea of cloud computing is based on a very fundamental principal of „reusability of IT capabilities'.The difference that cloud computing brings compared to traditional concepts of "grid computing","distributed computing", "utility computing", or"autonomic computing" is to broaden horizons across organizational boundaries.

Forrester defines cloud computing as:

"A pool of abstracted, highly scalable, and managed compute infrastructure capable of hosting end customer applications and billed by consumption."

Cloud computing models:

Cloud Providers offer services that can be into three categories.

1. Software as a Service (SaaS): In this model, a complete application is offered to the customer, as a service on demand. A single instance of the service runs on the cloud & multiple end users are serviced.

2. Platform as a Service (Paas):

Here, a layer of software, or development environment is encapsulated & offered as a service, upon which other higher levels of service can be built. The customer has the freedom to build his own applications, which run on the provider's infrastructure.

3.Infrastructure as a Service (Iaas): IaaS provides basic storage and computing capabilities as standardized services over the network. Servers, storage systems, networking equipment, data centre space etc. are pooled and made available to handle workloads.

Understanding Public and Private Clouds:

Enterprises can choose to deploy applications on Public, Private or Hybrid clouds.

Public Cloud:

Public clouds are owned and operated by third parties; they deliver superior economies of scale to customers, as the infrastructure costs are spread among a mix of users, giving each individual client an attractive low-cost, "Pay-as-you-go" model.

Private Cloud:

Private clouds are built exclusively for a single enterprise. They aim to address concerns on data security and offer greater control, which is typically lacking in a public cloud. There are two variations to a private cloud:

- **On-premise Private Cloud:** On-premise private , also known as internal clouds are hosted within one's own data center.
- **Externally hosted Private Cloud:** This type of private cloud is hosted externally with a cloud provider, where the provides facilitates an exclusive cloud environment with full guarantee of privacy.

Hybrid Cloud:

Hybrid Clouds combine both public and private cloud models. With a Hybrid Cloud, service providers can utilize 3rd party Cloud Providers in a full or partial manner thus increasing the flexibility of computing.

Cloud Computing Benefits:

1. Reduced Cost,
2. Increased Storage &
3. Flexibility .

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TECH NEWS

DARPA is testing drones it can launch from a plane—then collect mid-air

The Defense Advanced Research Projects Agency (DARPA) has conducted the first test of a new type of drone that can be launched from a plane in a swarm and recovered in mid-air when it's done its job.

What's the purpose?
The system could give drones a wider range than they would have if launched from an air base, and cut costs since they are reusable. The US military has been working on the concept for several years, and tested a similar system with a large swarm of micro-UAVs in 2017.

Millions of people fell for crypto-Ponzi schemes in 2019

Cryptocurrency scammers raked in $4.3 billion worth of digital money in 2019, more than triple 2018's haul. That's according to the latest in a series of recent data drops by blockchain analytics firm Chainalysis, all of which it has included in a lengthy report it published Wednesday entitled "The 2020 State of Crypto Crime."
Scammers exploit the fact that so many people are still fairly unfamiliar with cryptocurrency aside from its supposed "get rich quick" potential, according to Chainalysis. The various types of scams include fake token sales, blackmail scams, and fake services that promise to "mix" a user's coins with those of others in order to make transactions harder to trace—only to run off with the money instead.

A squishy robot hand can sweat to cool itself down

Robots are typically made of metal and motors, so they can easily overheat and stop working. To avoid that problem, researchers at Cornell University have created a soft robot hand that can cool itself down the same way we do—by sweating.
The hand is made up of three hollow 3D-printed fingers made from hydrogels. Each finger is filled with water and covered with a surface layer of micropores. The pores are closed at cool temperatures, but if they go above 86 F (30 °C), the surface layer expands, allowing the pores to open and "sweat" out the water, cooling the robot down.

How the North Korean hackers behind WannaCry got away with a stunning crypto-heist

The Lazarus Group is widely believed to have been behind several headline-grabbing hacks, including the breach of Sony Pictures in 2014 and the WannaCry ransomware hack in 2017, which affected hundreds of thousands of computers in 150 countries. But it was its theft of $81 million from the central bank of Bangladesh in 2016 that foreshadowed its eventual targeting of crypto exchanges. According to the FBI, the attackers spent more than a year doing reconnaissance before gaining access to the bank's computer system via an elaborate phishing campaign.gram operated by the U.S.

Augmented reality in retail: Virtual try before you buy

AR helps online shoppers understand what they're buying—and how precisely items from home improvement goods to cosmetics will work for them.

AR's bright future
As the technology evolves and gives users more and more accurate renderings of how digital objects look in physical spaces, I expect that more and more brands and industries will hop onto the AR marketing bandwagon. From fashion and accessories to footwear and home décor, and beyond, AR has the potential to transform and completely reimagine customer experiences.

Microsoft will invest $1 billion into carbon reduction and removal technologies

The software giant plans to offset all the emissions it produced since 1975.
Microsoft plans to establish a $1 billion fund dedicated to "carbon reduction, capture, and removal technologies," amid a broader commitment to clean up the software giant's emissions across its corporate history by 2050.
It's one of the largest funding commitments ever to methods of sucking carbon dioxide out of the air, which most research shows will be a necessary part of any plan to prevent catastrophic levels of global warming.

Collected by
Ms. K. Neelima
III CSE

A HAPPY LIFE MAY NOT BE A MEANINGFUL LIFE

"Life is never made unbearable by circumstances, but only by lack of meaning and purpose." For most people, feeling happy and finding life meaningful are both important and related goals. people's happiness levels were positively correlated with whether they saw their lives as meaningful. However, the two measures were not identical – suggesting that what makes us happy may not always bring more meaning, and vice versa.

Happiness depends upon the people's feelings and moods, their relationships with others, and their day-to-day activities. Feeling happy was strongly correlated with seeing life as easy, pleasant, and free from difficult or troubling events. Happiness is also correlated with being in good health and generally feeling well most of the time.

However, none of these things are correlated with a greater sense of meaning. Feeling good most of the time might help us feel happier, but it doesn't necessarily bring a sense of purpose to our lives.

Some people thought that money can gives everything to us in our life. Do you feel that only money can gives happiness in our life? having enough money seemed to make little difference in life's sense of meaning. some people say that the people from wealthy countries tend to be happier, however, they don't see their lives as more meaningful. Like that some people from poor countries tend to see their lives as more meaningful and they live life with happiness. so that "money doesn't buy happiness," we ought to say instead that "money doesn't buy meaning."

In our life, our relationships with other people are related to both how happy we are as well as how meaningful we see our lives. And feeling more connected to others improved both happiness and meaning. However, the role we adopt in our relationships makes an important difference.

A highly meaningful life may not always include a great deal of day-to-day happiness. And a highly happiness life may not always a meaningful life.So that, if you live life with meaningful things that you like, it gives you a satisfaction. So, if you feel your life goes with satisfaction then automatically you feel happy in your life because self satisfaction is the more important factor of the happiness.

So live life with some ethics and morals. It brings a meaning to our life then automatically we live happy life.

Ms. G. Sahithya
IV CSE

మన సాహిత్యం

ఆణిముత్యాలు

ఘన ఘనా ఘనము చీకటిమేడ వెలిగించు
మెరుపు దివ్వెల నూనె తరుగలేదు
పవలు రేలును తీరుబడిలేక ఘోషించు
తోయధీశుని గొంతు రాయలేదు
ఇనబాలకుని దినమ్మును గర్భమున బూను
పొడుపు దిక్పతి కాన్పు లుడగలేదు
ఋతురాజు ధారుణీసతికి సొమ్ములు పెట్టి
కులికించుపని మానుకొనగ లేదు
విశ్వ నిర్మాత చల్లని వీక్షణముల
నేటికిని కెంపుచార కాన్పింపలేదు
మూర్ఖలోకమ పనియెల్ల ముగియలేదు
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సహాయ ఆచార్యులు

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కంప్యూటర్ దండకం

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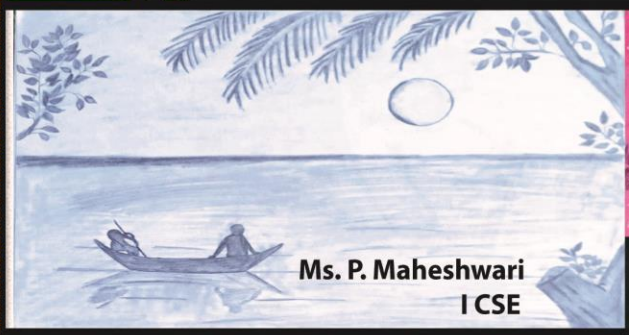
ఇమ్మంది జోసెఫ్ కిషోర్

III - సి.యస్.ఇ

Art Gallery

Ms. Ch. Bhavya Meghana
I CSE

Ms. S. Taraka Swathi
I CSE



Ms. P. Maheshwari
I CSE

Ms. G. Pavani
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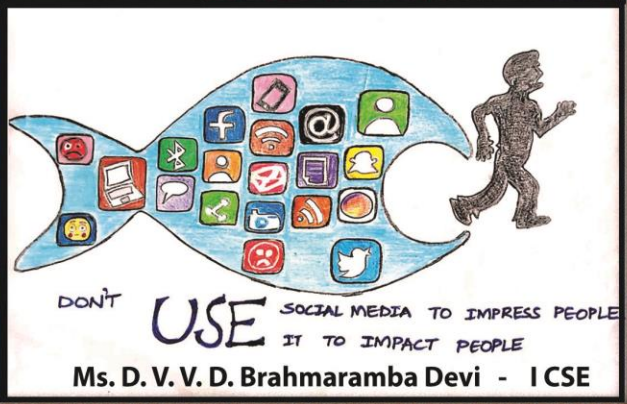

Ms. D. V. V. D. Brahmaramba Devi - I CSE

This Time That Year

Department of CSE organised a Two day National Level Technical Symposium 'CreSensE2k19' on 18th & 19th, February 2019.

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This magazine gives a chance to express yourself and is open to contributions from students of CSE Department.
Please send your articles(technical & non-tehcnical), art works, achievements and opinions to

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