



SFC-BYTES VOLUME 6, ISSUE 1

NEWS LETTER



DEPARTMENT OF COMPUTER SCIENCE
ST. FRANCIS COLLEGE FOR WOMEN, HYD-16

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“

A computer is like a
violin."

You can imagine it
making beautiful music,
but you have to learn how
to play
it

Bill Gates

”



Vision: Inspired by the visionary dynamism of St. Bartholomea, the Foundress of the Sisters of Charity, St. Francis College has its vision “Holistic Education for the Empowerment of Women”

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ARTIFICIAL INTELLIGENCE – A NECESSARY EVIL?

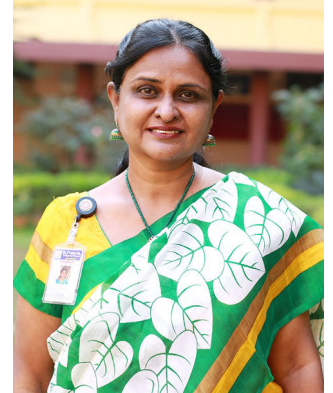
All of us will agree that today we are experiencing a data explosion. Someone said that Big data is the fuel on which Artificial intelligence runs. Artificial Intelligence to me could best be defined as the capability of a digital computer to perform a task normally attributed to intelligent human beings. Given the ability it has to process and analyze multiple data streams very fast, it is no wonder it is used extensively as a vigilance tool. While listing the numerous advantages it is imperative to look at some of the challenges it poses.

Challenges:

1. **Infringement of Human Rights:** Many scholars argue that it is an infringement of human rights. The right to privacy is recognised as a fundamental human right by Article 12 of the Universal Declaration of Human Rights. A large quantity of our personal information is collected - with or without our knowledge - and can be used to profile us and predict our behaviour. Most of the time we share our personal information, our beliefs, our likes and dislikes without even knowing who is going to use it and how it is going to be used. For example, Banks especially have extensively used Algorithms for a long time to generate credit scores and guide loan screening person's place of residence, web surfing habits, and even buying decision
2. **Are the views consolidated reliable?** Remember only the views of the people who can use the IT tools are taken, what about the views of those elders who are not technology savvy?
3. **Affects Human work Force:** Attaching AI enabled devices to a patient's body has reduced the need for nurses, The numerous websites providing help for real estate buying and selling have reduced the need for brokers. It has ushered in an era of unemployment as a result of the displacement of human labor
4. **Helps spread False Information:** Political parties often use it to generate and spread false information regarding the opposition parties. This erodes democratic values. Jeffrey Dastin, stated that "Amazon scraps secret AI recruiting tool that showed bias against women," (Reuters, October 9, 2018)

The need of the hour is to create public awareness about the AI operations' and its influence on our daily lives. Ensure there is greater transparency in the AI operations.

There is a lot of work to be done in this direction to protect human rights even as AI technology becomes more advanced and broadens into other sectors.



Dr. T. Uma Joseph

Principal

*Nothing has ever
been achieved
by the person
who says, 'It
can't be done.'*

**- Eleanor
Roosevelt**

IMPACT OF AI ON EDUCATION AND LEARNING PROCESS

AI in the new norm of the day, showing potential to address all challenges faced by society. Innovative teaching learning process which is a biggest challenge, can be accelerated by AI towards Sustainable developmental goals (SDG) and achieving Education 2030 agenda. But any technological advancement brings in multiple risks and challenges which are debatable.

Although UNESCO is supporting the use of AI technologies in education, at the same time, it is also trying to ensure that its application in educational is guided by the core principles of inclusion and equity to a larger extent. It also aims to shift the AI's role in addressing inequalities regarding access to knowledge, research, diversity of cultural expressions and to reduce the technological divides within and between countries. "AI for all" facilitates the advantage of the technological revolution to be accessed by all and use it for innovation and enhancing the knowledge.

Artificial intelligence (AI) offers effective support for online, personalised learning, assessments and everyday tasks of teachers. Personalized and adaptive learning can be achieved by analysing the student's data to track their progress, identify areas of additional support required to create study material for individual needs and style of learning. This experience helps the students to study and learn at their own pace. AI-powered tutoring systems helps in giving feedback and answers queries raised by guiding them through interactive lessons which can simulate and provide personalised assistance. It can generate educational content, such as quizzes, assignments, and instructional videos, reducing the burden on teachers and making high-quality resources more accessible.

Virtual Reality and simulations generated by AI can help students to explore virtual environments, conduct experiments, and practice real-world skills in a safe and controlled settings. Automatically generated AI algorithms can grade objective assignments, MCQS or programming exercises saving time for teachers and at the same time provides instant feedback to students. Large data sets generated from multiple assessment tools are evaluated to identify patterns and trends. AI-based tools can compare student's work against a vast database of existing texts to identify potential instances of plagiarism to promote academic integrity.

While the opportunities for AI are promising, the impact it causes on the interactions between students and instructors are still elusive. A study could be conducted on identifying the impact of AI on student and instructor interaction and any gaps, challenges or barriers thereof could be identified and addressed which could risk the safety of the stakeholders. While AI brings numerous benefits, it should complement, rather than replace, human involvement in teaching and evaluation processes. Teachers play a vital role in guiding and supporting students, and their expertise is essential in interpreting AI-generated insights and tailoring education to individual needs.



Dr. M. Shailaja Raj

Vice-Principal (R&D)



FEAR OF AI! CONSIDER WHO IS MAKING IT

From hearing the terms like AI and ChatGPT to learning and using it was an exhilarating experience. For someone who is not proficient with tech things to be able to get an output for a prompt given in the English language goes to show how democratized technology is becoming. Its great! But as a professor, I stop to think about what the consequences of this trend is going to be on the learning pattern of students. My fears are that the need to understand, process, internalize and apply will be redundant if an easy access like ChatGPT is available. Will it also make the job of a teacher obsolete? Will we be having a 'LISA' teacher in every classroom? LISA is a sari clad AI generated news anchor on Odisha TV who presents news in Odia and English. She was introduced to the world on 9th July 2023.



Dr. Mallika Shetty

Vice-Principal (Academic)

We need to brace ourselves up for all that AI brings with it. Let us not be intimidated. "Our intelligence is what makes us human, and AI is an extension of that quality." -This quote by Yann André LeCun, the Turing Award winning French computer scientist, should offer us the understanding that it's the inquisitiveness of the human race that has given birth to this technology. Should it be feared or be optimized to bring a better, safer and a happier world, is a call we must take! Organizations developing and deploying should be mindful to be responsible.

The new edition of SFC BYTES will be a place to get a synthesized understanding of all the advancements in the field of Computer Science. My sincere wishes to the department of Computer Science for their collective efforts to bring out this fine e-magazine.
Cheers

***"The best way to
predict the
future is to
invent it."***

- Alan Kay

EXTENDED REALITY (XR)

Extended Reality (XR) refers to a spectrum of technologies that merge the physical and virtual worlds, creating immersive and interactive experiences for users. It encompasses virtual reality (VR), augmented reality (AR), and mixed reality (MR). XR aims to enhance the way people perceive and interact with digital content, going beyond traditional screen-based interfaces.

Virtual Reality (VR) Functioning: VR is a fully immersive experience that transports users to a completely virtual environment. It typically involves wearing a head-mounted display (HMD) and using motion tracking devices to interact with the virtual world. VR can be used for various purposes, such as gaming, simulations, training, education, and entertainment.

Immersive Environment: VR uses head-mounted displays (HMDs) to create a fully immersive virtual environment. The HMD typically consists of screens placed close to the user's eyes, providing a stereoscopic view of the virtual world.

Head Tracking: VR systems include sensors that track the user's head movements in real-time. This tracking allows the display to update accordingly, maintaining the illusion of being present in the virtual environment.

Interaction: VR often involves handheld controllers or other input devices that allow users to interact with virtual objects and navigate through the virtual space. These controllers can track the user's hand movements and provide haptic feedback for enhanced interaction.

Augmented Reality (AR): AR overlays digital content onto the real world, enhancing the user's perception of their surroundings. It typically involves using a smartphone, tablet, or smart glasses to display virtual objects or information in the user's field of view. AR can be used for applications like gaming, navigation, industrial training, retail experiences, and educational tools.

Overlaying Digital Content: AR overlays virtual objects, information, or graphics onto the real-world environment. AR applications use devices like smartphones, tablets, or smart glasses with cameras to capture the real-world view and augment it with digital content.

Object Recognition: AR systems employ computer vision algorithms to recognize objects or features in the real world. By identifying and tracking these objects, AR applications can accurately place and anchor virtual content onto them.

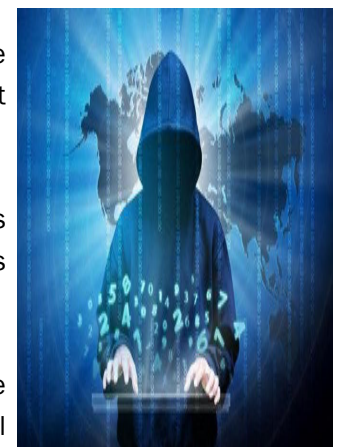
Interaction: Users can interact with AR content through touchscreens, gestures, voice commands, or other input methods. AR experiences often involve manipulating virtual objects, accessing information, or interacting with virtual characters or elements superimposed on the real world.



Suj - Dr. Sr. Sujatha Yeruva

Vice-Principal

(Administration)



Mixed Reality (MR): MR combines elements of both VR and AR. It allows users to interact with virtual objects that are seamlessly integrated into the real world. MR devices, such as Microsoft's HoloLens, use spatial mapping and depth sensing to anchor virtual content to the user's physical environment, enabling realistic and interactive experiences.

- Virtual Object Integration: MR combines elements of VR and AR, allowing virtual objects to be seamlessly integrated and interact with the real world. MR devices, such as Microsoft HoloLens, use sensors to understand the user's environment and spatially map virtual objects into the physical space.
- Spatial Mapping: MR devices scan the real-world environment using depth sensors and cameras to create a 3D map. This map enables accurate placement and interaction of virtual objects, as they are anchored to the physical surroundings.
- Interaction: MR experiences involve user interaction with virtual objects that appear to coexist with the real world. Users can interact with these virtual objects using gestures, voice commands, or physical touch, with the system responding accordingly.

These XR technologies have seen significant advancements in recent years, with improved hardware, software, and content development. They have found applications in various industries, including gaming, entertainment, healthcare, architecture, engineering, manufacturing, education, and communication. XR has the potential to revolutionize how we perceive and interact with digital information, offering immersive experiences that can enhance learning, collaboration, and entertainment. As technology continues to evolve, we can expect further advancements and innovations in the field of extended reality. XR relies on powerful hardware, sensors, algorithms, and software to create and render immersive and interactive experiences. The technologies involved vary depending on the specific XR technology being used, but the common goal is to bridge the gap between the physical and virtual realms, providing users with engaging and realistic digital experiences.

SILVER JUBILEE CELEBRATIONS

A milestone in one's life is great to achieve. Achieving that at the professional level is such bliss. We, the Computer Science Department, celebrate the Silver Jubilee of our lovely teachers, Ms. B.Kavitha & Ms. D.B.Rekha. Their 25 years of dedicated service in the teaching domain, leading the department as Heads of the Department during their tenure in a new and innovative way is commendable. They are always inspiring and cheerful in and out. We wish that they continue to foster an environment of positivity and collaboration. Ma'am, we are very thankful to you and look up to you both. Your commitment, dedication, and innovative teaching methods have always been a road not taken. Congratulations, ma'am's!

Celebrations of their Silver Jubilee and giving them a bouquet and sweets."



EVENTS HELD



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Connecting The Dots

Organized By
Department Of Computer Science
C@nnect 6.3



10th July, 2023
1.30 PM - 3.10 PM

Venue: Gerosa Hall

Bridge Course To
Bridge Your Gap



Audience: 1st Year B.Sc.Students(1B,1D,1E,1F & 1H)



BRIDGE COURSE- CONNECTING THE DOTS

The Department of Computer Science conducted a Bridge Course “Connecting the dots” on July 10th 2023 in Gerosa Hall from 1:30pm to 3:10pm. The course was organized for all the first year students of Computer Science. The session started with introduction about the course by Ms. Sowjanya followed by Ms. Renuka who Presented about Introduction to Computers followed by Ms. Preethi who Presented about the types of computer languages followed by Ms. Jennifer who presented about Algorithms and Flowcharts followed by Ms. Rajeshwari who Presented about types of software and followed by Ms. Persis who Presented about Microsoft Office Tools & Number System. Students actively participated in the session and gained a lot of knowledge about the basics of computers. An interactive quiz was conducted and feedback was collected from students at the end of the session. Overall it was fun, informative and a successful session which helped the first year students learn some new technical concepts with great enthusiasm and interest.



PG Final year, MSC. Computer Science and MSC. Data Science students went on a field trip to NetEnrich Technologies Private Limited, Hyderabad accompanied by faculty Ms.B.Jyothi, MS.Shobhana, Ms.Tabassum on 22/6/2023. The Students were addressed by Ms.Shruti Yandra and Ms.Bhavana from the HR team, who guided us throughout the session. They were 5 sessions given by various facilitators MR. NARENDRA (Director Of Talent Acquisition), Ms.Shruthi(HR), Ms.Radikha (Product Manager), Mr.Srikanth Kapila (Director Of Engineering), Mr. Praveen (Chief Technology Officer), Mr. Rama Krishna (Vice President), Mr. Suman (Product Manager) on various topics such as Resolution Intelligence Cloud to manage security and digital operations. Their hospitality was excellent, and they made us feel comfortable. Students gained knowledge on an overview of the company and how it operates, what data science is and how it is used in software companies, a session was an online session, who shared real-time examples and experiences. They enlightened us about NOC Engineer and discussed the case studies of data-driven NOC engineering. Finally, Ms. Shruti and Ms. Bhavana walked us through the office. Students expressed that it was a great experience and a very informative industrial visit, they graduate in a couple of months now know what kind of skills need to acquire in order to meet the requirements. In addition to that the presentations were very apt for our subject knowledge as well as briefing us about how the Software based companies work. The staff was knowledgeable and cooperative, and we gained valuable insights into the world of data science and product management. Everyone headed home with truly enriching experience.







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Department Of Computer Science
Is Organizing
CONNECT G.O
A One Day Workshop
on
Rundown With React



Newbie Learning

Resource Persons
Mr.Sriraj Nihar Sista
Mr.Rohith Gaddam



26th June, 2023 9.00 AM - 4.00 PM



Computer Lab 7



For Final Year B.Sc. SE(H) Students

Department of Computer Science had organized One day workshop on Rundown with React on 26 June 2023. The resource person for the same was/were Mr. Sriraj Nihar Sista, Mr. Rohith Gaddam from Newbie Learning. The event was organized for final year BSc Honours S.E students in Lab 7.

The session covered the basic concepts which included components, JSX, JavaScript. The instructor guided the students through installation of necessary tools such as Node JS, npm and a text editor. They also taught how to create a new react project using React app. The students actively participated in the hands-on session and successfully created a functional TodoApp and counter App using React. Their clear explanations, practical examples and hands-on exercises enabled us to grasp the fundamental principles of React and develop a solid foundation in building dynamic web applications.

Their workshop has undoubtedly left a lasting impact on the students and inspired the students to continue honing their React skills and exploring new possibilities in web development.

Total of around 41 students and faculty attended the workshop.



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Department of Computer Science

Resource Person



Mr. Mir Rashid Ali
Director, Delivery Cloud ERP

Organizes
Guest Lecture
on

**Contemporary Technology and
the Future of Mankind**

For PG FINAL YEAR STUDENTS
(M.Sc. Computer Science & M.Sc. Data Science)

Date : 23-6-2023 | Time : 11 : 40 to 12 : 40 pm | Venue : PG Block : Computer Lab 1

The guest lecture by Mr. Rashid Ali provided valuable insights into the world of Artificial Intelligence, IoT, Cloud Computing, RPA, and other emerging technologies. Attendees gained a deeper understanding of these concepts and their implications in today's rapidly evolving world. The lecture served as a reminder that continuous learning and adaptability are crucial in staying ahead in the ever-changing technological landscape.



FACULTY ACHIEVEMENTS



Ms. Jyothi

Book Name: PROCEEDINGS OF NATIONAL SEMINAR ON MULTIDISCIPLINARY RESEARCH AND PRACTICE VOLUME 1 PLAYBOOK:

<https://iecpublication.com/product/proceedings-of-national-seminar-on-multidisciplinary-research-and-practice-volume-1/>



Ms. Khalida Tabassum

Department of Computer Science

Best Usage Award from Department of Library,
Shastr Club



Ms.Khalida Tabassum:

Patent



Office of the Controller General of Patents, Designs & Trade Marks
Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India



Application Details

APPLICATION NUMBER	202341026303
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	08/04/2023
APPLICANT NAME	1 . Dr.ManI Sarma Vittapu 2 . Dr.U.Sivaji 3 . Dr.K.V.Rajani 4 . Prof. Dr.Eng. Harish Kumar G R 5 . Dr.TVG. Sridevi 6 . Ms.Khalida Tabassum 7 . Dr.V.Sangeetha 8 . Mr.Bathula Prasanna Kumar 9 . Mr.R.V.Gandhi 10 . Dr.M.Kalpana Chowdary
TITLE OF INVENTION	BLOCKCHAIN SYSTEMS ASSISTED IN RESOLVING SECURITY FLAWS AND RISKS IN THE COMMERCIAL INTERNET OF THINGS WITH THE HELP OF AI AND MACHINE LEARNING
FIELD OF INVENTION	COMPUTER SCIENCE
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 Filing Date :NA

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(57) Abstract :

The present invention relates to a blockchain system for resolving security flaws and risks in the commercial Internet of Things (IoT) with the assistance of artificial intelligence (AI) and machine learning (ML). The system utilizes a decentralized blockchain ledger to record and verify IoT data and transactions, while AI algorithms analyze the data in real-time to detect patterns, anomalies, and security threats. The system may also utilize smart contracts on the blockchain to enforce security rules and automate processes in the IoT environment. Additionally, the system may incorporate innovative consensus mechanisms, such as sharding or off-chain solutions, to address scalability challenges. The method for implementing the security measures involves recording IoT data on the blockchain, analyzing the data with AI algorithms, and utilizing smart contracts to enforce security rules.

No. of Pages : 23 No. of Claims : 10

DEPARTMENT OF COMPUTER SCIENCE - BEST PRACTICES**Introduction of new PG course - MSc Data Science**

Following the current trend of the Software Industry, department introduced MSc DS in 2022-23, which is an Inter-disciplinary course focused on acquiring skills for better career and job prospects.

Development of Apps for various College Systems

The faculty and students have been actively involved in developing Apps computerise various systems in College making all the information available on a click like Eflora College Route Map, College Virtual Tour, and Store Management.

Department Newsletter

Faculty and students are encouraged to write Articles for SFC Bytes our bi-annual department newsletter to explore about new work that is carried out in the field of technology.

Offering Courses for the Competitive Job Market

CCNA (CISCO Certification) is offered to UG and PG students to validate their knowledge on fundamental networking concepts.

Innovative Teaching Learning Methods

Innovative Teaching Learning methods like Flipped Classroom, Case Study, Assignments based on NPTEL course are practiced for ensuring learning in all types of learners, Open book test, Seminar, Peer learning are practiced in the department.

Academia- Industry Association

Association between Academia and Industry is strengthened through Workshops, Industrial Visits, Seminars, Internships and Live Projects.

Certification by Students and Faculty:

Students and Faculty are encouraged and guided to complete various certification of courses on Coursera and SWAYAM

Peer Teaching

Peer to peer teaching is an effective teaching method used in the classroom/ lab to enhance This enables the students to revise their learning and be able to consolidate it by teaching it to fellow students. These also improve their subject knowledge as well as increase their confidence. The faculty play the role of a facilitator in the classroom.

Reinforce Learning

By teaching to a peer, students review their own learning, which allows them to reinforce their own knowledge and skills.

Activities to enhance Confidence and Communication Skills amongst students

Peer Teaching, Projects, Presentations enhances the levels of self-confidence among students and develop Communication Skills. Every student in the classroom is given an opportunity to deliver a lecturette on a topic which will encourage students to gather information, prepare notes, participate in discussion with peers and teachers and to present his or her view in a gathering.

Mentoring

Mentors interact with students and identify if they have any learning barriers or any personal help is required. Mentors work with students individually to help students to work through difficult issues so that they can stay focused in the classroom and get the most of college.

Usage of Online Resources

Virtula Labs, Hackerrank, Codechef and IUCEE Webinars are various online resources used in the teaching learning process.

Lab Faculty MOM

Lab Faculty Minutes of Meeting register is maintained

Mentors and Mentee Interaction on weekly basis for PG

Students are guided for various career courses on industrial requirements to increase strength in technology

STUDENT ACHIEVEMENTS

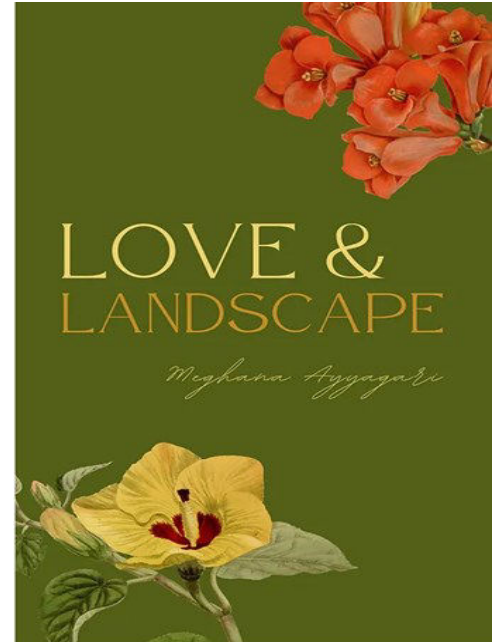
Name : V.S.S.Meghana

Course : BSc II B

Year : 2023-2024

Book name : love & landscape

Publisher name : Book leaf publishers



Name : Rahima

Course : MSc Computer Science

Year : 2023 - 2024

Achievement : Highest Scorer - Data Analytics Skilling Course organised by LTIMindTree, Hope Foundation

Names : Faria, Seeta Sanjana, Sophia, Lakshmi

Course : Bsc IIIH

Year : 2023-2024

Achievement : Top 13th place in the 24 hour Hackathon



UPCOMING EVENTS

Sponsored by




St. Francis
College for Women
Begumpet, Hyderabad-500016
(Autonomous & Affiliated to Osmania University)
NAAC Re-accredited with 'A' Grade 4th Cycle





Department of Computer Science
Organises
INTERCOLLEGIATE FEST
C@NNECT 6.4
Check Out The Exciting Events!

Dance & Freeze	Snap & Crack
Treasure Hunt	Fun 'O' Clock
Mastermind	Techie Quiz
Hackathon	KBC

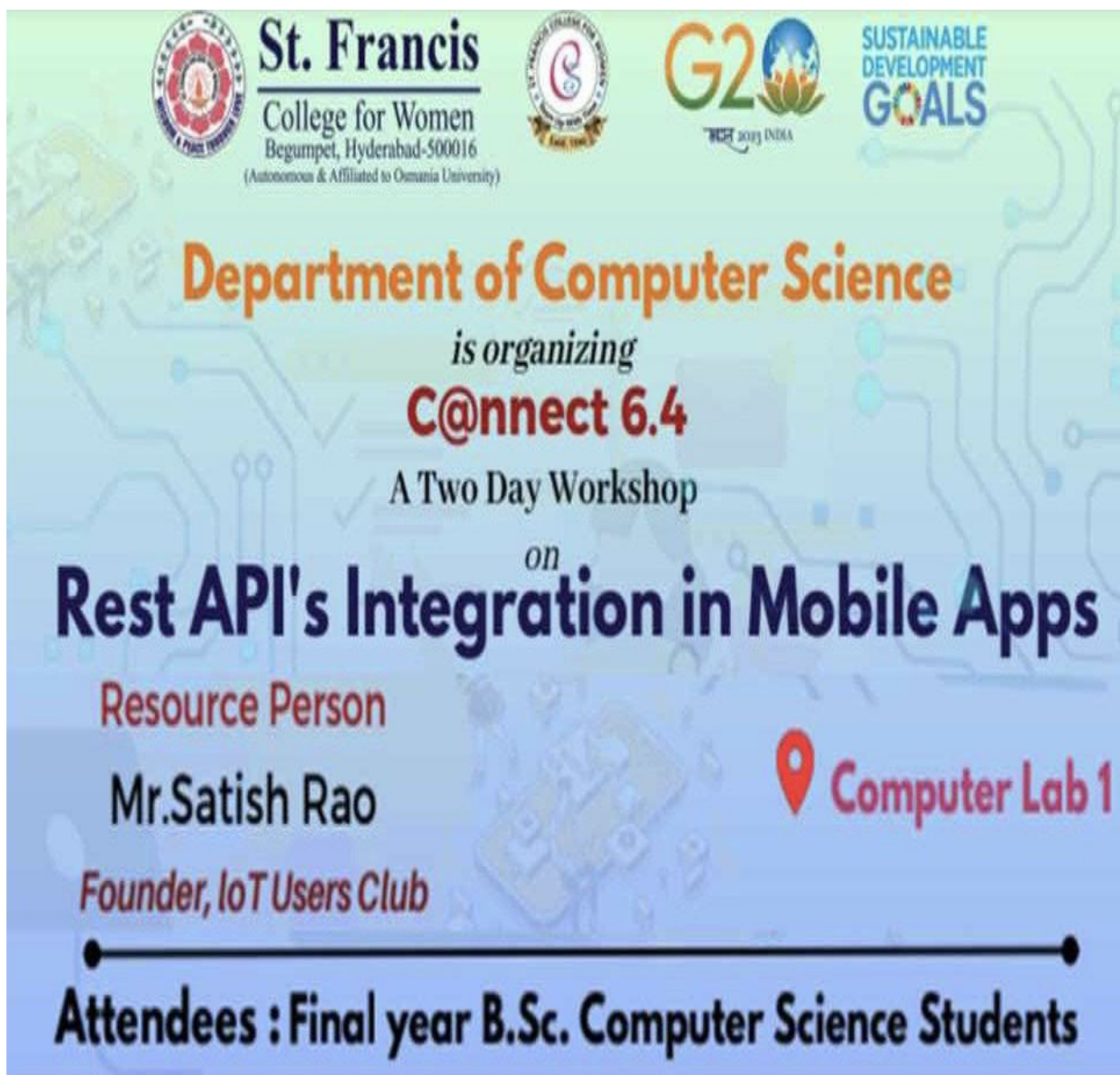
 29th August, 2023
  9.00 am Onwards
  PG BLOCK
CS Dept.

Come join us on this fun ride full of games, quiz and many more!!!

C@nnect 6.4

Yet once again the important and wonderful department event is lined up “C@nnect 6.4”. This year it is going to be a remarkable one as the Department celebrates the Silver Jubilee of MSc Computer Science. The event is Intra-collegiate fest where several events like Hackathon, KBC, Treasure Hunt, Snap and Crack, Dance and Freeze, Master Mind among many are the highlights. Students are geared up to host and participate. In order to encourage students with entrepreneur skills, chance to put up stalls also is being encouraged.

UPCOMING EVENTS



The poster features a light blue background with a faint circuit board pattern. At the top, there are four logos: St. Francis College for Women, Begumpet, Hyderabad-500016 (Autonomous & Affiliated to Osmania University); G20 India 2023; and Sustainable Development Goals. The main text is centered and reads: 'Department of Computer Science is organizing C@nnect 6.4 A Two Day Workshop on Rest API's Integration in Mobile Apps'. Below this, it lists the Resource Person as Mr. Satish Rao, Founder, IoT Users Club, and the location as Computer Lab 1. At the bottom, it states the attendees are Final year B.Sc. Computer Science Students.

St. Francis
College for Women
Begumpet, Hyderabad-500016
(Autonomous & Affiliated to Osmania University)

G20
INDIA 2023

**SUSTAINABLE
DEVELOPMENT
GOALS**

Department of Computer Science
is organizing
C@nnect 6.4
A Two Day Workshop
on
Rest API's Integration in Mobile Apps

Resource Person
Mr. Satish Rao
Founder, IoT Users Club

Computer Lab 1

Attendees : Final year B.Sc. Computer Science Students

Two Day workshop (Rest API's Integration in Mobile Apps)

The Department of Computer Science is to conduct a workshop on REST API's Integration in Mobile Apps. It is a two day workshop, the Resource Person is Mr. Satish Rao. Students are all excited to attend the workshop as it is a new learning for them.

FACULTY ARTICLES

GENERATIVE AI

Generative AI is an order of Artificial Intelligence used to induce different types of content like text, images, vids, audio and 3D models. It generates new and unique output by learning patterns from existing data. It can produce largely realistic and complex content that represents human creativity, making it a precious tool for numerous industries similar to gaming, entertainment, and product design.

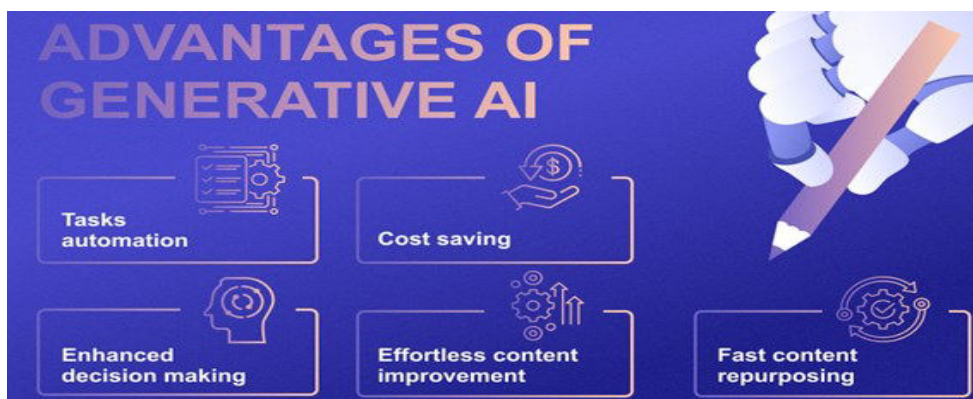
Generative AI models are able of make sophisticated conversations with users and also generate original content. Generative AI has enormous effects for business leaders and numerous companies have already gone live with generative AI initiatives. the businesses can profit by expanding labor productivity, Personalizing customer experience, accelerating R&D through generative design ,emerging new business models .

The most powerful advantage generative AI proposes is efficiency, that enables businesses to automate specific tasks and focus their time, energy and resources on more important strategic objectives. It reduces labor costs and increases the operational efficiency. It has impacted the pharmaceutical, manufacturing, architecture, engineering, automotive, aerospace, defense, medical, electronics and energy industries by augmenting core processes with AI models. It has greater impact on marketing, design, corporate communications and software engineering by augmenting the associate processes that span many organizations.



D.Sowjanya

*Department of Computer
Science(HOD)*



“

If you get tired,
LEARN TO REST
not to quit!

-Bansky

”

EXPLORING THE METAVERSE (MV) : THE NEW FRONTIER OF DIGITAL REALITY

Introduction: In recent years, the term "metaverse" has gained a lot of attention, capturing the imagination of technologists, futurists, and even the general public. Created by Neal Stephenson in his 1992 science fiction novel *Snowfall*, the metaverse refers to a virtual universe that exists alongside our physical reality where people can interact, work, play and create. As technological development continues to accelerate, the metaverse is rapidly moving from futuristic fantasy to tangible possibility.

Understanding the Metaverse: We explore the idea of a fully immersive and interconnected digital world where users can participate through virtual reality (VR), augmented reality (AR) and many other interfaces. From virtual environments and avatars to social interaction and economic systems, we delve into the building blocks of metaverses.

Real world applications: While the metaverse may seem like a concept limited to science fiction, it already has practical applications in several industries. We explore how companies are using the metaverse for virtual conferences, immersive training simulations, collaborative workspaces, and even virtual marketplaces. For example, case studies and success stories that highlight the potential of metaverses to transform education, healthcare, entertainment and more.

Challenges and considerations: Major issues such as privacy and security issues, potential social and ethical implications, and the need for standards and regulations to ensure a safe and inclusive digital environment. Addressing these challenges proactively is critical to creating a meta version that benefits society.

Opportunities and prospects: MV offer for innovation, entrepreneurship, and economic growth. From virtual real estate to digital art, virtual fashion and more, the metaverse presents a whole new economy waiting to be explored. In addition, we speculate on the future development of metaverses, their progress and possible effects on our daily lives.

Conclusion: The Metaverse represents a paradigm shift in the way we interact with technology and each other. It has the potential to shape communication, business, entertainment and almost every aspect of our lives. Going forward, it is critical that stakeholders, policy makers and individuals actively participate in shaping the meta-version to ensure the inclusion, accessibility, and ethical use of this revolutionary technology. The metaverse is no longer a distant dream; it is an exciting frontier that entices us to explore and embrace the limitless possibilities it holds.

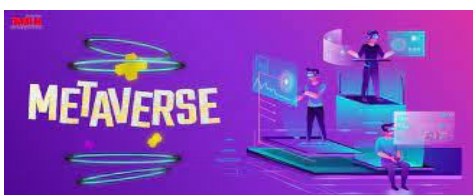


B. Jyothi Reddy,

Asst. Professor,

PG Coordinator,

***Department of Computer
Science.***



LINKEDIN: TO ENHANCE STUDENT ENGAGEMENT, EMPLOYABILITY AND CAREER DEVELOPMENT

Social media can be a powerful resource for young adults, while also providing valuable career and networking opportunities, so leveraging the resources available online can create a competitive advantage in the world of work. Teaching students how to use available resources can help them put the right people in the right places. Being able to find reasons why the service is neglected and what can be done to change can draw more young adults to the site, giving them access to a site that offers a broad range of services to its users.

The world is constantly changing, the hiring process is increasingly complex, and recruiters must adapt to the new digital age. Recruiting no longer means removing vacancies from the labour market. HR professionals must be excellent communicators, open and transparent about the policies of the company they represent, especially in an online environment where young employees spend most of their time. These days, the online medium helps you convince and present yourself, and it's a win-win for both candidates and recruiters. Just as candidates should create as complete a profile as possible, companies should also create a professional image. The way they write their profile, and their attention to detail can say more about a candidate than a CV in its classic paper form. LinkedIn is a great environment for HR professionals and job seekers alike to expand their knowledge and connect with the right companies. Candidates can apply, socialize and build engaging and engaging resumes, and recruiters can research the market in new and interactive ways, learn new things about candidates and talk to them before scheduling an interview.

The second-largest market for LinkedIn worldwide is India. The software and IT industries account for the biggest percentage of members, followed by the manufacturing, corporate services (consulting, accounting, and HR), financial, and educational sectors. With new technological developments and digital opportunities on the horizon, Ashutosh Gupta, country manager for LinkedIn in India, said, "It's encouraging to see our country fully engaged in skilling and upskilling, with members in India consuming twice as many learning hours on the platform as members in the US. As India continues to develop a skills-first labour market, we aspire to be a true partner in the lives of professionals as we prepare to welcome the next 100 million professionals.

Professionals in India used the site to learn for 4.6 million hours in 2022, almost twice as many hours as Americans did. 'Up skilling employees' is India's L&D (learning and development) leaders' top goal, and 'offering learning opportunities' is their go-to option for boosting retention, according to LinkedIn's Workplace Learning Report. Management, communication, and sales are among the top 10 most in-demand skills on LinkedIn this year in India. Tech skills like software development, SQL, and Java are also on the list. The list also includes analytical and leadership abilities, which are crucial soft skills for a variety of work responsibilities. Young people need a network that meets their needs, regardless of whether they are still in college, have just graduated from college, or have professional work experience.

Whether young people are still in college, fresh out of college, or have professional work experience, they need a network that fits their needs. Each group has different requirements depending on their status. Students still in college need a network of internship opportunities. Recent graduates and young professionals with work experience should be able to find entry-level positions that match their experience level. With highly educated positions in the company, LinkedIn is on its way to attracting and succeeding more young users. Features that appeal to younger users will continue to increase LinkedIn's value to its younger user base, connecting professionals to help drive its success.



DR. K SIRISHA

Department of ECONOMICS



Failure is the opportunity to begin again more intelligently.

- Henry Ford

NEURAL NETWORKS AND DEEP LEARNING: THE WAY TO A SMARTER FUTURE

In the fast-paced world of technology, neural networks and deep learning have emerged as the driving force behind groundbreaking advancements in artificial intelligence. These cutting-edge technologies have unlocked the potential for machines to learn, adapt, and make informed decisions, similar to human cognitive abilities. Neural networks are computational models inspired by the structure and function of the human brain. The human brain is a highly complex and powerful organ responsible for various cognitive functions, including learning, memory, perception, and decision-making. Understanding the relationship between neural networks and the human brain can shed light on both artificial intelligence and neuroscience. The human brain consists of billions of interconnected neurons, nerve cells that process and transmit information using electrical and chemical signals.

Neural networks in artificial intelligence are composed of artificial neurons, also known as nodes or units, organized in layers. These networks process information through weighted connections between neurons, similar to synapses in the brain. The human brain is capable of learning from experience, allowing us to acquire new skills and knowledge. This process is often referred to as synaptic plasticity. Artificial neural networks can also learn from data through a process known as training. During training, the network adjusts its internal parameters (weights) to minimize the difference between its predictions and the actual outcomes, much like the brain adjusts synaptic strengths based on experiences.

Deep learning is a fascinating and powerful branch of artificial intelligence (AI) that allows computers to learn and make decisions like humans. It's often used to solve complex problems that were previously challenging for traditional programming methods. Imagine you want to teach a computer how to recognize different types of animals in pictures. You might start by showing the computer many pictures of animals and telling it which animal is in each picture. Gradually, the computer learns to identify patterns and features that are unique to each animal, such as the shape of their ears or the color of their fur.

Deep learning is like this process but on a much larger and more sophisticated scale. Instead of just looking for basic patterns, it uses artificial neural networks to analyse data in multiple layers, each building upon the previous ones. These layers allow the computer to learn increasingly complex features, just like how our brains work when we recognize objects. Through applications such as image and speech recognition, natural language processing, healthcare, gaming, finance, robotics, and more, neural networks have demonstrated their versatility and potential to solve challenging problems. As technology advances, we can expect neural networks to continue revolutionizing the way machines understand and interact with the world, opening up new possibilities for AI-driven innovations.



P.RENUKA

Department of Computer Science



"Computer science is the operating system for all innovation."

-Steve Ballmer

PROMPT ENGINEERING

PROMPT, an abbreviation for PROMPTS for Restructuring Oral Muscular Phonetic Targets, is a comprehensive approach to speech production disorders that has expanded to encompass not only the well-known physical-sensory aspects of motor performance, but also its cognitive-linguistic and social-emotional aspects. Prompt engineering is a concept in artificial intelligence, specifically natural language processing (NLP). In prompt engineering, the task description that the AI is expected to complete is embedded in the input, such as a question, rather than being explicitly provided. Researchers utilize prompt engineering to enhance the capabilities of LLMs on a wide range of common and complex tasks, including question answering and arithmetic reasoning. Developers employ prompt engineering to create resilient and efficient prompting techniques that interface with LLMs and other tools. You can achieve significant results with simple prompts, but the quality of the outcomes relies on the amount of information you supply and how well-crafted it is. A prompt may include details such as the instruction or question you are conveying to the model, as well as context, inputs, or examples. These elements can be utilized to provide better instructions to the model and, consequently, obtain improved results.

A prompt contains the following elements:

- ◆ Instruction - a specific task or instruction you want the model to perform
- ◆ Context - external information or context that can steer the model to better responses
- ◆ Input Data - the input or question that we are interested to find a response for

Output Indicator - the type or format of the output.

Prompt Engineering Techniques:

- ◆ N-shot prompting (Zero-shot prompting, Few-shot prompting)
- ◆ Chain-of-Thought (CoT) prompting
- ◆ Generated knowledge prompting



B. JYOTHI REDDY,
Asst. Professor,
PG Coordinator,
Department of Computer
Science



*The roots of
education are
bitter but the
fruit is sweet.*
- Aristotle

POWER BI

A platform for data visualization with a focus on business intelligence is called Microsoft Power BI. Power BI's dashboard is capable of reporting and presenting data in a wide variety of different formats, including graphs, maps, charts, scatter plots, and more. It was created to be utilized by business professionals with varying levels of data experience. The "AI Insights" feature of Power BI, on the other hand, employs artificial intelligence to help users discover insights within data sets.

Power BI Desktop, Pro, Premium, Mobile, Embedded, and Report Server are all parts of the larger Power BI platform. Although some of these tools are free to use, the pro and premium versions offer more advanced insights through paid memberships.

The Microsoft Power Platform, which also includes Power Apps, Power Pages, Power Automate, and Power Bipower Virtual Agents, etc. These programs, which were developed as "low-code tools," aid companies in data analysis and visualization, business solution design, process automation, and chatbot creation.

What is the purpose of Power BI?

Power BI is made to provide you with data-driven insights, regardless of your level of expertise with data or your level of experience in the corporate sector. The platform is frequently used for things like:

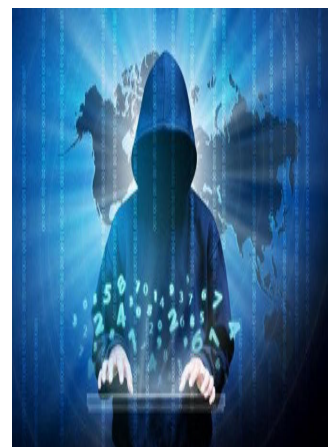
1. Making reports and dashboards that use images to show data sets in various ways.
2. Connecting several data sources, including cloud storage, onsite data warehouses, and Excel sheets, and then transforming them into business insights .
3. Transforming data into a variety of various visualizations, such as ribbon charts, gauge charts, combo charts, bar and column charts, decomposition trees, and pie charts, among others numerous alternatives.
4. Granting all employees access to data, tools for data visualization, and insights in order to foster a work environment that is data-driven.



D. Swetha

Asst Professor,

*Department of Computer
Science*



EDGE COMPUTING

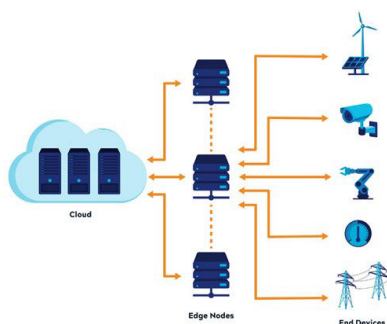
Edge computing is the distributed computing framework that brings enterprise applications closer to data sources such as IoT devices or local edge servers, by this edge computing we can expect improve in response time and save bandwidth. This computing more than technology is an architecture and a location sensitive form of distributed computing. The increase of IoT devices at the edge of the network is producing massive amount of data storage and using all that data in cloud centers pushes the network bandwidth requirements to the limit.

Edge computing allows devices in remote locations to process the data at “edge” of the network or by the local servers and when data needs to get processed in the central datacenter, only the most important data is passed on by minimizing delay.

Edge computing helps the enterprises to optimize their day-to-day operations by rapidly processing the large amount of data at or near the local sites where the data is collected. This is more logical than sending collected data in a centralized cloud or any primary datacenter, which causes excessive delay and performance issue.

Edge Computing has transformed the ways companies and business operate. This technology has enabled the digital transformation of our societies, edge computing signifies moving computing power physically closer to where data is generated by reducing the latency and network cost.

There are several key factors driving the growth of edge computing including rise in number of cases require low-latency processing and importance of big data and adoption of AI, IoT and the increase in number of smart devices, 5G adoption and telecoms.



Priyanka Thakur

Lecturer

Dept of Computer Science

*The roots of
education are
bitter but the
fruit is sweet.
- Aristotle*

AI IS TAKING OVER

Seetha: Hey Ram! How are you doing?

Ram: Hi Seetha! I am good, how about you?

Seetha: I am good as well. I was going through lot of articles these days about AI and Bots. I wonder how the technology is increasing at this fast pace.

Ram: Yes, Seetha! They are increasing at a great pace. Do you know how these are created?

Seetha: Yes, it's all about artificial intelligence, some programming, some data.

Ram: Yes, Seetha, but for all of these, the building block is an algorithm.

Seetha: An Algorithm? What does that mean?

Ram: In simpler words, if we have to climb ten store building, we need to climb up all the steps, right! In the same way, if an application or a bot is to be developed, it has to be given certain instructions. Following the same, an application or a bot will function.

So, an algorithm is a step-by-step procedure to complete a task.

Seetha: Oh, I see! Now, I understand that any program or any application has this underlying factor of the algorithm. So how will I know how many steps I have to climb to reach my destination?

Ram: So, your task is to climb ten store building (identified as task), count the initial steps (identified as input) and estimate the following no of steps by performing some mathematical operations appropriately (output). Finally you will be able to reach the destination following those calculations.

So it's input> instructions/calculations>Output

Ram: Also note that the algorithm is designed based on the problem you identify.

Seetha: Ram, I may have used the escalator or a lift to climb the building, right?

Ram: Oh yes, Seetha! You could have opted for any of them depending on the hurry you are in or the situation. Algorithms are different types. We could opt for a particular types of an algorithm depending on the problem, your inputs, and your optimization.

Seetha: Then this is a big study altogether!

Ram: Yes Seetha! If you are fascinated about Algorithms and it's uses, you could check out the types of algorithms in detail and the career options it has for future generations.

Seetha: Indeed Ram. I will check it out. Thank you for sharing it with me. Good day.

Ram: Good day, Seetha!



Sharanarathi Malleesh Sowmya

Lecturer

Dept of Computer Science

**Failure is the
opportunity to
begin again more
intelligently.
- Henry Ford**

STUDENT ARTICLES

APPLE VISION PRO

WHAT IS THE APPLE VISION PRO?

Apple blazoned a new product on June 5 2023, to great fanfare. The Vision Pro is a computer that's worn on your face, the computer's affair is put through a physical screen, that affair is projected directly into your eyes with two veritably small but high- resolution displays a veritably small distance in front of you.

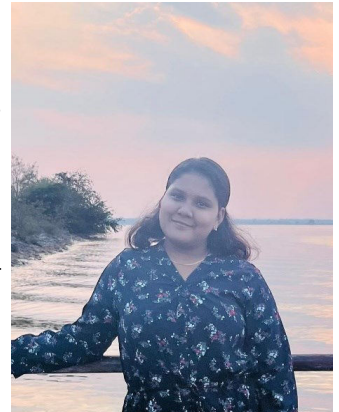
HOW DOES THE APPLE VISION PRO WORK?

Rather than control the computer through a keyboard, mouse, or touch screen, the primary stoner interface is through eye shadowing and gestures. The computer senses what you're interested in interacting with by watching your eye movement and also looks at your hands to determine what you want to do. The Vision Pro can display 3D objects in your current space or indeed transport you to new spaces. Apple, still, slightly mentioned the terms AR and VR during their advertisement. In doing so, they drew a line people haven't drawn ahead. This is no AR or VR device or technology. The technology is a spatial computer. The Vision Pro captures the full attention of your eye, and so you are, by description, immersed in a virtual terrain

Software

Apple Vision Pro runs visionOS(internally called xrOS), which is deduced primarily from iOS core fabrics, and XR-specific fabrics for foveate picture and real-time commerce. The operating system uses a 3D stoner interface navigated via cutlet shadowing, eye shadowing, and speech recognition. For illustration, the stoner can click an element by looking at it and pinching two fritters together, move the element by moving their pinched fritters, and scroll by fluttering their wrist. Apps are displayed in floating windows that can be arranged in 3D space. visionOS supports a virtual keyboard for textbook input, the Siri virtual adjunct, and external Bluetooth peripherals. Apple stated that “ hundreds of thousands of familiar iPhone and iPad apps ” would be compatible with the platform.

Apple has always been in the long run of the aesthetic and new innovative software and also mechanicals, it has noway failed to surprise us with its rearmost upgrades in technology, it was always the first one to take a big vault in the field of electronics, indeed now vision pro is an amazing product with the hand and ultimate apple features which catches the eye of the stoner. But as every coin has 2 sides this hi- tech product of apple has some downsides too, starting off with its price, the price of this product is estimated to be \$ 3,499(roughly 2.9 lakhs in indian currency), Limited Field of View, implicit health enterprises, and dependence on third- party app support. As with any new technology, it's essential to precisely consider these advantages and disadvantages before making a purchasing decision.



Adepally Devishya

Roll no. : 121322044002.

BSC'MSCS (2D)



Access to computers and the Internet has become a basic need for education in our society.

~Kent Conrad

SERVICE ORIENTED COMPUTING AND STRUCTURE

Service orientated computing is a brand new pattern of computing which makes use of services as the basic constructs to assist the improvement of fast , low-fee and clean composition of dispensed programs even in heterogeneous environment. The principle motto of it is to create a international of cooperating services wherein software components are assembled with little effort into a network of offerings that may be loosely coupled to create bendy dynamic commercial enterprise processes and agile packages that may span companies and computing platforms. The situation of SOC (Service Oriented Computing) is extensive and relatively complicated, spanning many concepts and technologies that find their origins in numerous disciplines which are woven together in an complicated manner. To construct the provider version, SOC is based at the service orientated architecture (SOA), that is a manner of reorganizing software packages and infrastructure into a hard and fast of interacting services. Service-Orientated Architecture (SOA) is a technique of software program development that uses software program additives known as services to create commercial enterprise applications. Each provider offers a business functionality, and also can speak with each other across platforms and languages. Builders use SOA to reuse services in distinct structures or combine several unbiased services to carry out complicated tasks. However for imposing SOA we want to follow a few suggestions and standards a number of which are interoperability, unfastened coupling, abstraction, and granularity. Interoperability-this specifies that every carrier in SOA consists of description files that designate the capability of the provider and the associated terms and situations. Loose coupling-offerings in SOA have to be loosely coupled, having as little dependency as feasible on outside sources along with records fashions or records systems. They must also be stateless without retaining any information from past sessions or transactions. Abstraction-customers or service users in SOA need not understand the carrier's code good judgment or implementation info. Granularity- services in SOA ought to have the correct size and scope, ideally packing one discrete commercial enterprise function in line with service. A number of the benefits of SOA are faster time to market, green upkeep and more adaptability. As there are benefits of SOA there also are disadvantages of it along with constrained scalability, increasing interdependencies and unmarried point disasters. Consequently service computing and architecture plays an critical function in enhancing new approaches of computing.



Sarodiya Pal

Roll no:

121322044051

BSc MSCs 2D

***Dream, Dream ,
Dream because
dream
transforms into
thoughts and
thoughts result
in action***

***- A.P.J Abdul
Kalam***

ARTIFICIAL INTELLIGENCE IN THE PET INDUSTRY

The integration of Artificial Intelligence (AI) technologies has resulted in a significant transformation of the pet industry. AI in pet technology has changed how we care for our loved pets, from cutting-edge health monitoring to interactive toys and robotic companions. AI-powered wearables and monitoring devices have opened the path for

proactive pet health monitoring. These gadgets monitor vital signs, activity levels, and even sleep patterns through sensors and algorithms. Real-time data analysis enables early anomaly detection, enabling pet owners to promptly administer veterinarian care and make

knowledgeable choices regarding the health of their pets.

While there are no specific robot names exclusively used in the pet industry, some companies have given their pet-related robots specific names. Here are a few examples:

Felik: It is a laser pointer pet toy that engages dog or cat in AI-based play. The device tracks and responds to a pet's movements automatically using a camera and algorithms. The software calculates the size of the room, makes an attempt to map the best path for the laser, and then continuously

moves in response to the pet's response. The AI technology also stops the laser from illuminating the pet or nearby people directly.

Mookkie: The AI-powered pet bowl called Mookkie made its premiere at the CES show in 2019. To prevent other animals from eating a pet's food, Mookkie employs the visual recognition framework Volta AI. When an animal approaches, a camera integrated into the food bowl analyses its face and, if a match is found, opens a flap over the bowl, allowing access to the food inside.

Varram: The Varram Pet Fitness Robot provides a demonstration of how AI technology can be used to improve the health and fitness regimens of animals. The Varram Pet Fitness Robot offers to keep pets physically active, mentally engaged, and thrilled even when their owners are not around to connect with them directly through interactive play, exercise, and treat rewards.



Vadlamudi Nishita

Roll no. : 121322030023

M.Sc.Data Science



Success is a vehicle which moves on a wheel named hard work, But the journey is impossible without the fuel named self confidence. - A.P.J Abdul Kalam

QUANTUM COMPUTING

Entering the strange, mystical realm of quantum computing sends you headlong into a place where the typical laws of computer logic evaporate. Think of conventional computers as crates that function by manipulating bits that are either zeros or ones - almost like toggling a light-switch on and off. But quantum computers? These machines utilize the enigmatic properties of subatomic particles, such as electrons or photons for instance, that act as qubits to become even more powerful and daunting than their predecessor.

Thanks to superposition, qubits have a split personality and can exist simultaneously as 0, 1, or both, like magic specks of stardust. This unique trait allows quantum computers to explore multiple solutions at once and performing calculations in parallel.

When it comes to qubits, there's an added bonus! Entanglement is their special power, connecting the states of two qubits despite the distance between them. If one qubit alters, the other is immediately aware, as if they were inseparable. This mystical property enables quantum computers to share and analyze data in an astonishingly rapid and interconnected manner.

How can we use the remarkable power of quantum computing? Well, suppose you're wandering through an enormous labyrinth, trying to escape as fast as possible. Regular computers would have to test each path individually to discover the most efficient route. However, because of the magical abilities of superposition and entanglement, quantum computers can traverse all paths at once. They can cut through the maze in a quantum moment and identify the perfect solution with lightning speed.

Quantum computing, like a newborn dinosaur peeping out of its shell, is still at its inception. Researchers are dedicatedly grappling with the untamed instincts of qubits, managing their fragile quantum states. Essentially, their focus lies in fabricating quantum gates and error-correction codes to enhance the stability and precision of quantum computers.

Fields like cryptography, drug discovery, weather prediction, and optimization problems that baffle traditional computers could be transformed by quantum computers in the days ahead. So, when you ponder computers again, keep in mind the mind-bending marvels of quantum computing, where the game's rules are rewritten and the possibilities



Medha Kauluri

Roll no. : 121322044031

BSC MSCs (2D)

"Software is a gas; it expands to fill its container."

Nathan Myhrvol

QR CODES : A HISTORICAL RETROSPECTIVE

In our increasingly digital world, the need for quick and convenient access to information has become paramount. Enter the QR code, a versatile two-dimensional barcode that has revolutionised the way we interact with digital content. From marketing campaigns to contactless payments, QR codes have found their way into various aspects of our lives, simplifying tasks and enhancing user experiences.

QR codes were invented in 1994 by Denso Wave, a subsidiary of Toyota. They were created to track vehicles during the manufacturing process. The name QR stands for Quick Response, as they can be decoded quickly. QR codes have since evolved to be used in a variety of applications.

QR codes were first used in Japan in the early 2000s. They were used for mobile marketing campaigns and to provide additional information on products. QR codes quickly gained popularity in Asia and have since spread to Europe and North America.

QR codes are now used in a variety of applications, from mobile payments to event check-ins. They are a popular tool for contactless interactions especially during the COVID-19 pandemic. QR codes have also evolved to include design elements and can be customised to fit a brand's aesthetic.

QR codes are expected to continue to evolve and be used in new applications. With the introduction of 5G technology, QR codes could be used for augmented reality experiences. They could also be used for authentication and security purposes.

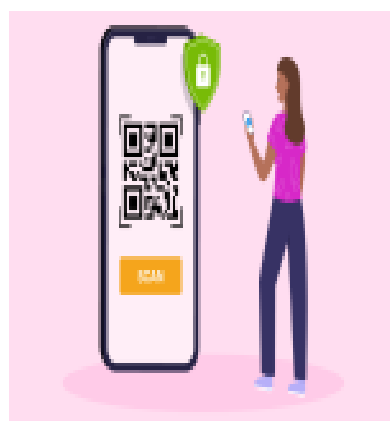
QR codes have come a long way since their invention in 1994. They have evolved from their original purpose of tracking vehicles to being used in a variety of applications. With their contactless and customizable nature, QR codes are expected to continue to be a valuable tool for businesses and consumers alike.



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AUGMENTED REALITY AND VIRTUAL REALITY: TRANSFORMING USER INTERFACE

In recent years, the rapid advancements in technology have led to groundbreaking developments in the fields of augmented reality (AR) and virtual reality (VR). These immersive technologies have not only revolutionized entertainment and gaming but have also transformed user interfaces across various industries.

Augmented Reality: It overlays digital content onto the real world, enhancing the user's perception and interaction with their environment. AR has brought significant advancements to user interfaces, particularly in fields like education, healthcare, and retail. In education, AR applications provide interactive learning experiences by overlaying informative graphics, animations, and 3D models onto textbooks or real-world objects. Medical professionals can utilize AR to visualize and manipulate complex medical data during surgeries, improving precision and efficiency. In the retail sector, AR enables customers to virtually try on clothes, accessories, or even furniture before making a purchase decision.

Virtual Reality: It creates a fully immersive digital environment that replicates real-world experiences or transports users to entirely virtual realms. VR has reshaped user interfaces in industries like gaming, architecture, and training. In gaming, VR allows players to enter lifelike virtual worlds, where they can interact with characters and objects as if they were physically present. Architects leverage VR to create virtual walkthroughs of their designs, enabling clients to experience the proposed structures before construction begins. Furthermore, VR has revolutionized training programs by providing realistic simulations for pilots, surgeons, and other professionals, allowing them to practice complex tasks in a safe and controlled environment.

Integration and Synergy: AR and VR are often combined to create an even more transformative user interface experience. By merging real and virtual elements, mixed reality (MR) interfaces have emerged. MR applications are used in fields such as manufacturing, where assembly instructions can be overlaid onto physical objects, enabling workers to perform complex tasks with precision. Moreover, the integration of AR and VR technologies has opened up new possibilities in teleconferencing, remote collaboration, and virtual social interactions, enhancing communication and bridging distances.

Conclusion: The convergence of augmented reality and virtual reality has brought about remarkable changes to user interfaces across various industries. From enhancing education and healthcare experiences to revolutionizing gaming and architecture, these technologies continue to push the boundaries of what is possible. As AR and VR evolve further, we can anticipate even more immersive, interactive, and user-friendly interfaces that transform the way we perceive and interact with the world.



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THE RISE OF TECHNOLOGY : AUGMENTED REALITY (AR) VS VIRTUAL REALITY (VR)

Hey siri! Can you play this song for me??

This kind of rise in the technology revolutionizing the future and as well as the present that's nothing but immersive technologies. These technologies makes us live in graphic world. These type of technologies are the Virtual Reality and Augmented Reality. This is the most fascinating and fastest growing technology. Immersive technologies create or extend reality. It creates a digital environment having applications in different domains. It's gaining popularity with every passing day.

VIRTUAL REALITY - This new technology called the virtual reality uses the VR headsets which creates a graphical or a stimulated environment. This helps a human to indulge himself into it to get to experience an entirely different reality. This all began back in 1800's this magnificent idea was brought up at the time when practical photography came into existence. Morten Heileg invented the first VR device called Sensorama in 1957. The term Virtual Reality was coined later by Jaron Lanier 1987. One of the best VR products are Oculus Quest, Nintendo labo VR kit, Sony Playstation VR, Lenovo Mirage and many more. Many think VR is just about gaming but it also has much potential like it's revolutionizing many sectors like education, military, medicine, sports etc. VR technology in real life also plays a significant role, class VR is one such innovation, it uses the VR tech to increase the encouragement and knowledge for students, they use VR headsets with user friendly interface.

AUGMENTED REALITY - Augmented reality is a technology that projects computer generated augmentations which helps us perform tasks very efficiently. AR which falls in between reality and virtual reality is a method used to render real world data and present it intuitively so that virtual reality elements resemble the present reality. For example trying to fit any furniture using the IKEA app etc, this technology is called augmented reality. It has been raging and the revolution is not stopping anytime soon. Ivan Sutherland developed the first AR gadget called Sword of Democracy in 1968. It was



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BSc BCCAC

***"An algorithm
must be seen
to be believed."
– Donald
Knuth***

IS PHONE OUR COMPANION?

Mobile phones have undergone a significant evolution since their inception as mere communication tools. Initially, these devices were designed with the primary purpose of enabling individuals to communicate with each other while on the move. However, with the advancement of technology, mobile phones have transformed into constant companions that provide a multitude of services beyond simple communication.

The Pros and Cons of Having Phones as Our Constant Companions On one hand, the use of phones as our constant companions has many undeniable benefits. They provide us with a quick and convenient means of communication, allowing us to stay in touch with friends, family, and colleagues at all times. Furthermore, phones serve as personal organizers, storing our calendars, to-do lists, and reminders, helping us stay organized and on top of our daily tasks. Additionally, smartphones offer a plethora of educational opportunities, giving users access to a wealth of knowledge and information at their fingertips. With the ability to browse the internet, access online courses, and utilize educational apps, phones can enhance learning and promote continuous intellectual growth.

However, the constant companionship of phones also presents numerous drawbacks. First and foremost, excessive phone use can lead to a decrease in face-to-face social interactions, causing individuals to feel isolated and disconnected from the world around them. Finally, the effect of excessive phone use on mental and physical health should not be ignored. Studies have shown that spending excessive time on phones can contribute to increased levels of stress, anxiety, and can even disrupt sleep patterns. Additionally, the sedentary nature of phone use can contribute to a sedentary lifestyle, leading to various health problems like obesity and cardiovascular issues. Consequently, while phones offer numerous benefits, they also pose several disadvantages, highlighting the need for individuals to strike a balance between their phone usage and their well-being.

In order to find a balance in our phone usage and ensure its healthy integration into our daily lives, it is crucial to adopt strategies that promote mindful and purposeful engagement. For example, designating specific times during the day where phones are put away, such as during meals or before bed, allows for uninterrupted quality time with loved ones and promotes better sleep hygiene. Additionally, practicing digital detoxes or technology-free days periodically allows individuals to recalibrate their relationship with their phones and re-establish focus on other fulfilling activities. Lastly, practicing self-awareness and monitoring our phone usage can help identify any unhealthy patterns or dependencies we may have developed. Ultimately, finding a healthy balance in our phone usage requires intentionality, self-discipline, and a commitment to nurturing all aspects of our well-being.



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"The best way to predict the future is to invent it."

– Alan Kay

INFORMATION TECHNOLOGY

Information technology is the study of electronic equipment, particularly computers in collecting, storing and retrieving information. Over the years IT sector has got so much advanced. Now it is widely used in almost all the sectors all over the world. Today we are using mobiles, laptops and computer, etc. being unaware of the fact that they are all result of evolution and advancement in IT sector. A few years ago no one had thought that it would take such a big leap very soon.

But it happened today, as the computer scientist and software expert say we are living in the era of information technology where even the smallest of atoms work on the principles of IT or the devices invented through it. The fundamental IT definition is that its the utilization of innovation to tackle business or authoritative issues for an expensive scope. IT or information technology which means using computer for collecting storing and manipulating data or information. Though for those who have no information of IT, they face various technical troubles whether its large or minor.

IT offers various jobs. Some are computer programmer, web developer, support specialist, IT technician, network engineer, database admin, software engineer, computer scientist, data scientist, IT security specialist and many more. Hardware and software are the two very vital parts of the IT. Hardware comprises of various devices and software is its soul. Without software a hardware is a piece of junk only.

The 21st century is going to experience the usefulness and effectiveness of IT's incredible invention i.e. AI or Artificial Intelligence. So, we there by conclude that IT is the application of technology to understand the company and administration to be physically changed.



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"The first law of computer science: every problem is solved by yet another indirection."

-Bjarne Stroustrup

CHATGPT: ADVANCED CONVERSATIONAL AI

ChatGPT is based on OpenAI's GPT-3.5 architecture, which is one of the most advanced and powerful language models created to date. It has been trained on a massive amount of text data from the internet, allowing it to generate human-like responses and provide accurate information on a wide range of topics. ChatGPT has a knowledge cutoff, which means its training data only goes up until a specific date. As of my knowledge cutoff in September 2021, I am not aware of any updates or advancements made to the model since then. While ChatGPT can provide helpful and informative responses, it's important to remember that it may not always be completely accurate or up to date. It's always a good idea to verify information from reliable sources.

OpenAI has made efforts to improve the ethical considerations and potential biases in its language models. However, like any AI system, ChatGPT is influenced by the data it was trained on and may reflect certain biases present in society. ChatGPT can be used for a variety of applications, including generating human-like text, answering questions, providing explanations, offering creative suggestions, and assisting with language translation.

OpenAI has encouraged developers and researchers to explore the capabilities of ChatGPT by providing access to its API, allowing the integration of ChatGPT into various applications and platforms. While ChatGPT is a remarkable language model, it also has limitations. It may sometimes produce responses that sound plausible but are incorrect or nonsensical. It's important to use critical thinking and not solely rely on its answers.

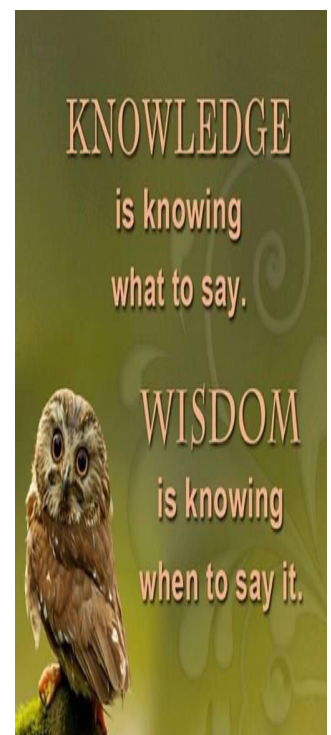
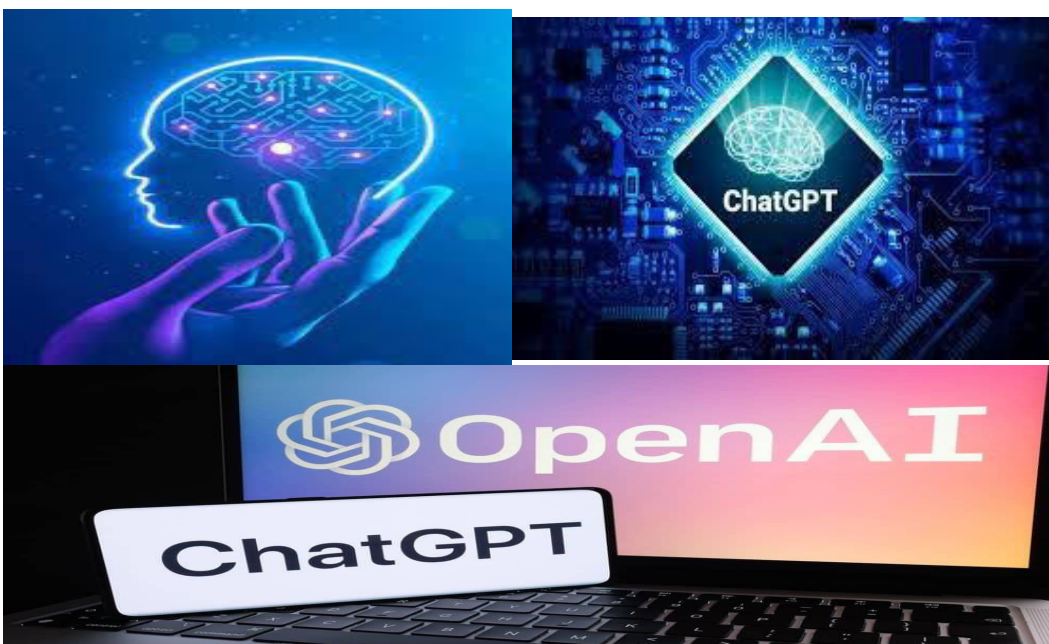
While ChatGPT is a remarkable language model, it has organized competitions, such as the ChatGPT Feedback Contest, to gather feedback and insights from users, aiming to improve the system's performance and address any limitations or issues. OpenAI continues to refine and develop its language models, and it's likely that there have been updates and advancements to ChatGPT since my knowledge cutoff. It's always exciting to keep up with the latest developments in the field of natural language processing!



CH. Harika

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MPCS-3B



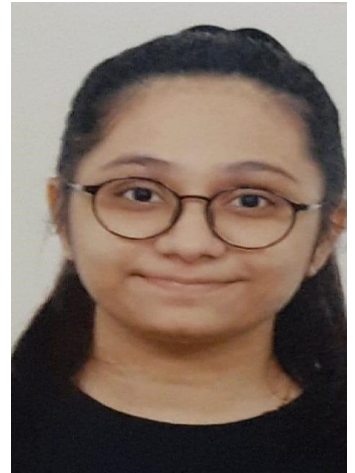
QUANTUM COMPUTERS: AN IDEA

Cloud computing in the healthcare industry describes the practice of implementing remote servers accessed via the internet to store, manage and process healthcare-related data. This contrasts with establishing an on-site data center with servers, or hosting the data on a personal computer. Since the introduction of the Electronic Medical Records (EMR) Mandate, healthcare organizations across the United States have adopted cloud-based healthcare solutions as a means of storing and protecting patient records.

The importance of cloud healthcare is increasing on day-to-day basis. Some of them are:

- 1) Efficient Electronic Medical Record-Keeping
- 2) Providers of cloud-based healthcare solutions handle the administration, construction and maintenance of cloud data storage services, enabling healthcare providers to reduce their initial costs and focus efforts on the things they do best caring for patients.
- 3) "The cloud" has helped to ensure that every healthcare provider can access a data storage solution that will adequately protect patient's sensitive information.
- 4) Cloud computing in healthcare also offers additional flexibility through the typical pay-as-you-go cost structure associated with data storage. Cloud-based healthcare solutions are fully-scalable and capable of expanding in unison with your business.

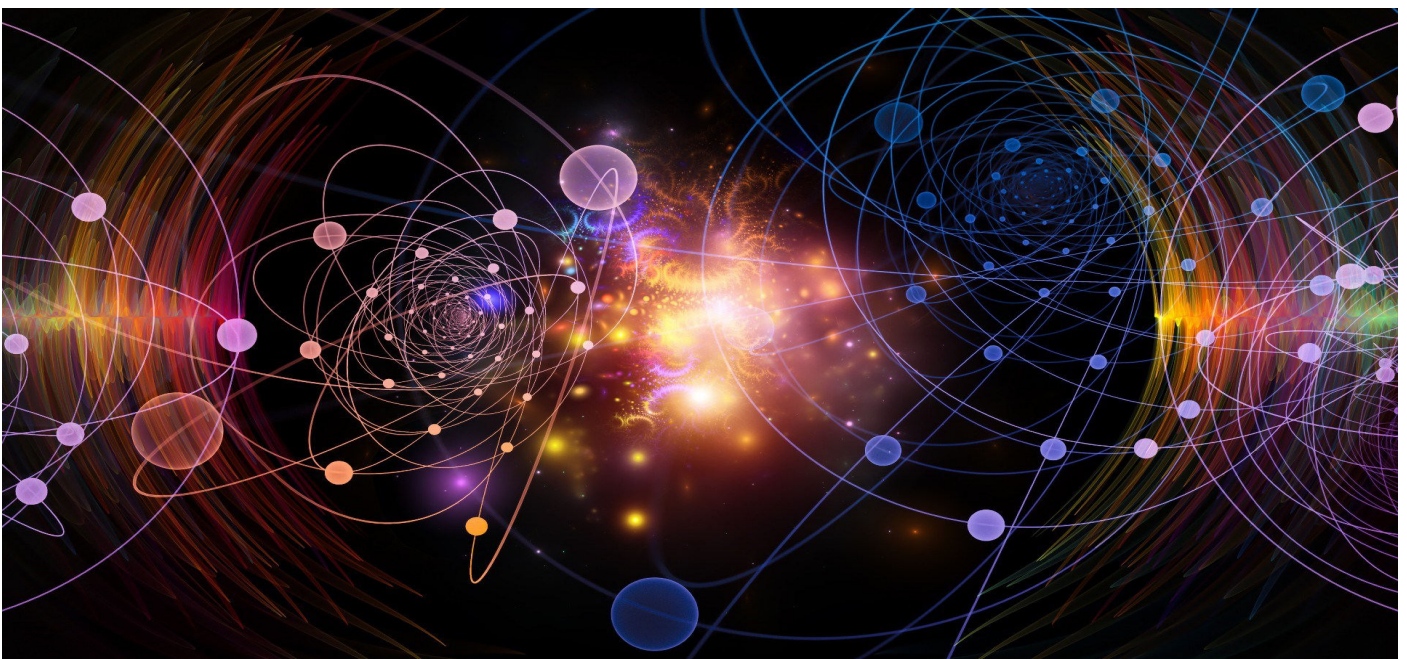
Thus, I conclude Cloud healthcare application is a platform for them not only to save their time but also for efficient results in easy and trusted ways.



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ROBOTICS REVOLUTION: TRANSFORMING INDUSTRIES AND SHAPING THE FUTURE

In recent years, robotics has emerged as a transformative technology that has revolutionized various industries and reshaped the way we live and work. From manufacturing and healthcare to agriculture and space exploration, robots have become indispensable tools, augmenting human capabilities and unlocking new possibilities. This article explores the incredible advancements in robotics, their impact on different sectors, and the potential future implications of this rapidly evolving field.

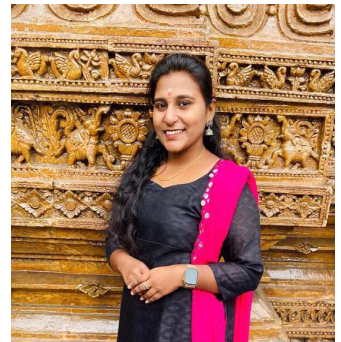
The Rise of Robotics: The field of robotics has made significant progress, driven by advancements in artificial intelligence, machine learning, and sensor technology. Today's robots are no longer limited to rigid, pre-programmed movements but possess the ability to learn, adapt, and interact with their environment. This shift has opened the door to a wide range of applications across industries.

Transforming Manufacturing: One of the most notable impacts of robotics has been in the manufacturing sector. Industrial robots now perform tasks that were once exclusively done by humans, leading to increased efficiency, precision, and safety. Robots equipped with advanced vision systems can assemble complex products, work alongside human workers, and handle hazardous materials. This integration of robots in manufacturing processes has not only improved productivity but also created new job roles focused on robot programming and maintenance.

Revolutionizing Healthcare: Robotics has also revolutionized the healthcare industry, enhancing patient care and streamlining medical procedures. Surgical robots enable minimally invasive procedures, reducing patient trauma and accelerating recovery. Robots are also used for physical therapy, rehabilitation, and assisting patients with mobility challenges. In addition, robotic exoskeletons provide support to individuals with spinal cord injuries, enabling them to walk again. With the aging population and increasing healthcare demands, robotics holds immense potential to address these challenges effectively.

Automating Agriculture: The agricultural sector is benefitting from the automation capabilities of robots. Farming robots equipped with advanced sensors and computer vision can perform tasks such as planting, harvesting, and monitoring crops. They can assess plant health, detect diseases, and optimize resource usage. Robotic automation in agriculture leads to increased crop yields, reduced labor costs, and more sustainable farming practices.

Exploring New Frontiers: Robotics has expanded our reach beyond Earth, enabling space exploration and research. Robotic rovers, like NASA's Mars rovers, have provided invaluable data about our neighboring planets. These rovers traverse hostile terrains, collect samples, and transmit critical information back to scientists on Earth. Furthermore, autonomous drones and underwater robots are used for environmental monitoring, disaster response, and exploring uncharted territories.

**C.VISHNU PRIYA****MSC COMPUTER SCIENCE****//**

ARTIFICIAL INTELLIGENCE

Blue Eyes Technology, introduced by IBM researchers in the late 1990s, aims to create computer systems that can perceive and respond to human emotions and behavior. Blue eyes technology is the Blue refers to Bluetooth and Eye refers to seeking the information from our feelings. It's the power to collect information about you and interact with it through special techniques like face recognition, speech recognition, etc. Even if you can understand your emotions at the touch of the mouse. It verifies your identity, feels your presents, and starts interacting with you. Human recognition depends totally on the power to perceive, interpret, and integrate audio-visuals and censoring.

It utilizes sensors like cameras and microphones to capture emotional and physiological data. Through pattern recognition and machine learning, it interprets the data to understand the user's emotional state. The technology focuses on context-aware systems that adapt their behavior based on user emotions and preferences. Blue Eyes Technology finds applications in healthcare, education, marketing, and human-computer interaction. However, accurately interpreting human emotions remains a challenge. Privacy concerns arise due to the collection and analysis of personal data. Ongoing research aims to improve the technology's accuracy, reliability, and practicality. Blue Eyes Technology is an evolving field inspiring new developments in affective computing and emotion recognition. It holds the potential to enhance user experiences and personalize interactions.

Blue eyes technology consist of,

1. Mobile measuring device or Data Acquisition Unit (DAU)
2. Central System Unit (CSU)
3. The software

Mobile measuring device or Data Acquisition Unit (DAU) :

The DAU used in the Blue Eyes technology is the mobile component of the system. The main function of DAU is to gather the physiological information from sensors and forward to the CSU for processing and verification purposes.

Central System Unit (CSU)

CSU is the next squint of wireless-network connection in the Blue Eyes technology. The CSU mainly contains code and a wireless blue tooth module. This CSU section is integrated to a personal computer using USB, parallel and serial cable. The mini-jack socket is used for audio data accessing. The microcontroller (Atmel- 89C2051) inside the unit handles the I2C EEPROM- programming and UART transmission.

The software

The software will respond in real time according to the operator's physiological condition. This software helps to transfer the data or information from managers to the data analyzers. Then it transfers the processed information from this data analyzers unit to the GUI controls and data analyzers. At last, the data visualization module supports a user supervisor interface section. The visualization module is in the off-line mode and it will continually fetch the information from database and also records the video, audio and physiological parameters. Thus 'Blue Eyes' software enables the supervisor to know about the physiological condition of the operators.

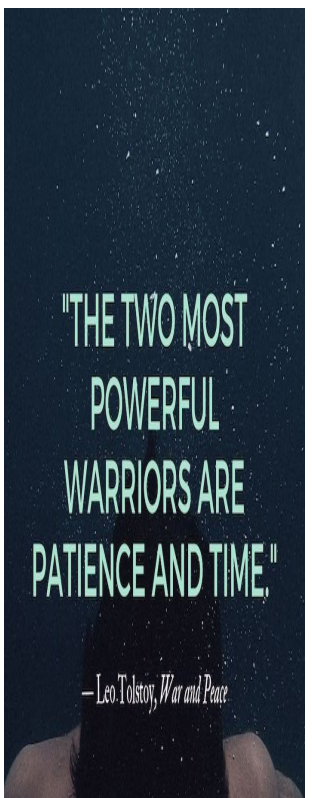
Blue Eyes Technology represents an ambitious vision of creating intelligent systems that can understand and respond to human emotions. While significant progress has been made, there is still much to explore and develop in this exciting field.



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CLOUD MIGRATION:

In today's fast advancing world, cloud technology is capable of providing its services anywhere and at any time. It provides the organizations with the tools, security, services to improve their business objectives. Hence, to take advantage of the services provided by the cloud, the organizations are now opting to migrate their business operations into the cloud. The migration involves data, applications, infrastructure and some IT processors.

In general, "Cloud migration" can be defined as moving one's business operations from On-premise servers into the cloud environment and also from one cloud to another cloud. Now the question will be why migrating to cloud? The biggest reasons for the organizations to opt for migration is to reduce the expenditure spent on, On-premise data centres and also includes many benefits like scalability, flexibility, security and profitability.

The organizations might have the questions on what cloud migration strategy need to be adopted? The cloud migration strategies were described by an IT research company called "Gartner". These are known as 6 R's: Re-hosting, Re-platforming, Re-purchasing, Re-factoring, Retiring, Re-visiting. The way we consider these strategies depends upon the migration goals, complexity, size of current environment and business model. Next, comes the question on how does the process of migration work? Most of the organizations have a similar process which consists of the following basic steps: Establishing goals, Select the cloud environment, migrate data, Optimize, certify post move success.

Presently the challenges of migration are Migrating large databases is a complicated process. We need to make sure vital data is transferred without any errors & avoid duplications and Current system needs to be available throughout the migration process. Cloud can reduce the operational cost of running and maintaining hardware & software, enabler of digital business, helps in R & D & Provides Business solutions. in information technology, emerging cyberthreats and counter measures.



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"A computer is like a violin." You can imagine it making beautiful music, but you have to learn how to play it."

– Bill Gates

CHATGPT: TAKING CONVERSATIONAL AI TO NEW HEIGHTS

Conversational Artificial Intelligence has improved greatly in recent years, and OpenAI developed ChatGPT as a new language model. People and machines can connect in a more natural way than ever before thanks to ChatGPT's natural language processing skills and ability to deliver human-like responses. This game-changing technology has impacted a wide range of industries, including customer service and virtual assistants.

ChatGPT's unequalled adaptability in recognising and creating conversational information is one of its differentiating features. It has become skilled at mimicking human interactions by being trained extensively on vast volumes of text data, adapting to diverse subjects, and providing insightful responses. It can even express humour with the use of its conversational capabilities, in addition to holding smart talks and teaching knowledge. As a result, it has become a crucial tool for businesses looking to improve customer relations and speed up support services.

ChatGPT's influence goes beyond customer service and can be applied to a variety of sectors. ChatGPT's ability to give knowledge, answer questions, and resolve concerns has improved educational platforms and healthcare systems. ChatGPT can also be used by researchers and developers for prototyping novel conversational interfaces, improving user interfaces, and investigating unique use cases. ChatGPT's capabilities will improve as technology advances, leading to new developments in conversational AI.

ChatGPT will have a significant impact on the employment landscape as it develops. Though there are concerns about automation, ChatGPT should be viewed as an effective augmentation tool rather than a replacement for human labour. Automating routine and repetitive processes allows experts to concentrate on more complex problem-solving, creativity, and invention. Professionals will be able to attain new levels of production and efficiency thanks to the symbiotic relationship between people and AI, unleashing previously unrealized potential in numerous fields.



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*It always seems
impossible until
it is done. -
Nelson Mandela.*

O O P S

Object-oriented programming (OOP) is a core important concept that has developed software development in coding. This concept consists of classes and objects where objects are created based on the class they belong to, OOP enables developers to create different applications.

At the core intention of object-oriented programming is all about how an object works and its attributes, which are instances of classes. A class is defined for creating objects, defining their properties and behaviors named methods. Complex situations are easily handled using these class and objects

One of the key advantages of OOP is modularity. Data is encapsulated using this OOP concept. This concept helps reading the code in a faster way. Object can be modified in an user friendly way where

the data of the object is easily accessed and this changes in the object's data doesn't effect the code in

any other way.

Inheritance, another fundamental concept in OOP, which behaves in a hierarchical way. Inheritance helps in making the object take the attributes and properties from their parent class in very easy way. This inheritance helps in extending of the class using different classes. Inheritance consist of two different in order to give properties to objects that are parent class and child class.

Polymorphism is another powerful feature of OOP. Different methods having same name int the class is one of the crucial concepts of OOP. Polymorphism enables flexibility and makes code more generic.

Polymorphism helps in reducing the code size and complex readability of the code.

Object-oriented programming has transformed the way software is developed. By focusing more on readability and encapsulation, OOP provides strong base for building complex applications. By using these concepts in the code, it alters the code and improves the code in many other ways.



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CRYPTOCURRENCY

Cryptocurrency is a digital or virtual form of currency which uses cryptography for security. It is designed to work as a medium of exchange, just like traditional currencies issued by governments such as the US dollar, Euro or Japanese yen. Usually, physical currencies are controlled by central authority of that particular country whereas cryptocurrencies depend on cryptographic techniques for creating the new unit as well as for doing transactions safely and securely.

In 2009 using pseudonym Satoshi Nakamoto, a cryptocurrency called bitcoin was created anonymously. Since then, thousands of other cryptocurrencies such as altcoins, have been developed each with its own features, purposes and underlying technologies. Transactions made with cryptocurrencies are recorded on the blockchain, providing transparency and immutability. Some cryptocurrencies also offer additional functionality beyond being a medium of exchange, such as enabling smart contracts or serving as a platform for decentralized applications (D Apps).

It is important to note that the regulatory environment surrounding cryptocurrencies differs from country to country. Governments and financial authorities worldwide have been actively studying and developing regulations to address issues related to consumer protection, money laundering, taxation and security within the cryptocurrency ecosystem.

Of course, just like any new invention, cryptocurrencies have their challenges. Their values can be as unpredictable as a roller coaster ride, and there are still some concerns about regulation and security. But as more people join the puzzle-solving adventure, the future of cryptocurrencies looks bright and full of possibilities.



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*Live as if you
were to die
tomorrow. Learn
as if you were to
live forever.*

**-Mahatma
Gandhi**

DEVELOPING TECHNOLOGIES IMPROVING ABOUT DIAGNOSIS AND TREATMENT

As we know that in recent years with help of AI some particular fields are increasing their productivity like health care, finance, retail and manufacturing industries

AI IN HEALTH CARE

AI can be used in health care to diagnose diseases and develop treatment plans. It can analyze medical images, such as X-rays, MRIs, CT, ECG etc, to detect abnormalities and it can help doctors identify the most effective treatments for individual patients based on their medical history and other factors.

"As we know, getting X-rays or scans done is easy, but it can take 2-3 days to receive the report. In future with the help of AI, we can change that. With the help of one X-ray report, a doctor should be able to identify the main problem with that particular person's X-rays. For example, if a person has a brain tumor, they must take an ECG, MRI or CT to determine the issue with their brain. With the help of AI in the future, a doctor should be able to identify the main problem or disease using just one X-ray".

"In the future, thanks to AI, not only doctors but also regular people should be able to identify problems with specific body parts by looking at X-rays. This can lead to more accurate diagnoses and faster treatment".

In the future, AI could help patients with diagnosis, scanning's and X-rays in no. of ways. For example, AI could analyze medical images to identify patterns that might not be visible to the human eye, which could lead to more accurate diagnosis and better treatment plans. AI could also help doctors and patients monitor patient health and predict outcomes, which could help prevent health problems before they occur. Additionally, AI could help with drug discovery, which could lead to the development of new treatments for a variety of diseases. Overall, AI has the potential to revolutionize health care by improving the accuracy and the speed of diagnosis, monitoring patient health, and developing new treatments.



Manisha

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“
Education is
the mother
of leadership.
”

- Wendell Willkie -

IS IT REAL OR... VIRTUAL?

Have you ever wondered what it is like to see the Taj Mahal up close or any other places? It can be a thing, flowers, animals, or a forest, it can be anything but, in this era, we could not enjoy any of these due to our busy life. This is where Virtual Reality (VR) and Augmented Reality (AR) come into the picture. We can see the world around us without traveling to places, we can do shopping, and browse things. VR and AR let us do these things. You might be wondering what VR and AR are. Well, let me give a quick intro about these-



Virtual reality is a computer-generated 3D simulation. This means that reality or an alternative world is generated graphically. Users need to wear a headset to experience virtual reality. These headsets have a technology called head tracking, where the user can physically move his head to look around his environment (Popular VR Headset- PlayStation VR). The headset gives you a 360-degree view of the virtual environment. Augmented Reality allows you to see the world around you with digital images layered on top of it...in other words, it combines the real-world and computer-generated content. AR allows you to translate the text by using the camera, identifying your surroundings, and displaying the information (for example. Google lens). We take pictures using the most popular social media app, Snapchat, for filters which is AR. In VR it is completely virtual however in AR, it uses a real-world setting enhanced with sounds and other stimuli. There is a perfect cross between AR and VR which is known as Mixed Reality. A very suitable example would be the newly launched Apple Vision Pro headset. It is a mix of Virtual Reality and Augmented Reality where one can navigate through virtual reality simply by using your eyes, hands, and voice.

Although VR and AR have some similarities and do sound a bit similar, they are two completely different technologies. Though there are some advantages of using VR and AR, there are a few disadvantages too. The cost of AR device is high compared to VR, lack of user privacy in AR, graphic levels in VR headsets are not as good as AR headsets.

As Virtual Reality and Augmented Reality technologies are growing rapidly. Many industries are already using them in education, healthcare, fashion, manufacturing and many more. There are a few apps which use these technologies such as Lenskart, Myglamm, Nike etc. The technology is ever-growing and in the coming years we might be doing everything like working, shopping, and using apps VR and AR technologies.

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SMART ENVIRONMENT

A day in our life starts around a smart environment.

So what is a smart environment ? For me a Smart environments is something which provides many benefits to the people which include comfort, service quality, energy efficiency, automation, safety, and convenience. The smart environment is a term which defines the idea of ubiquitous or physical word that contains numerous sensors, actors, controller and other elements which helps make people's lives more comfortable and smarter.

The internet of things is one of the advanced technologies used in smart environment. As the environment and applications become smarter they are based on many resource constrained IoT devices that are susceptible to variety of vulnerabilities. The advantages of IoT are nearly limitless and its applications are changing the way we live and work by saving resources and time. The main technological components of smart environment include sensor technology, assistive technologies, and data processing. It is a home –based and wearable sensing platforms

Urban populations are increasing day by day in our country and in the world, and as result of mobility , cities have to cope with mobility ,cities have to cope with new needs in many areas such as infrastructure, affordable housing , water, environmental cleaning , health services , transportation and security As a developing country India has a lot of collaborations with the ideas of developing and beneficial smart environment . In the smart cities of India that include smart office ,smart home, smart environment are developing as well .We are more connected today and the change is dynamic .the wireless connectivity world is developing quickly due to the demand for content .Gigabit wireless WiFi and cellular 5G applications will continue to expand into our lives, delivering a content- rich environment that improves our personal experience is only the beginning .

A smart environment is the future of the beautiful country.



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BSc BCCAC

Education is the passport to the future, for tomorrow belongs to those who prepare for it today.

-Malcolm X

WHY CHOOSE TABLEAU ?

Nowadays every day, people are generating millions of data it is very difficult to analyze millions of rows. Generally, we load the data into the database, and through SQL commands we extract the insights from data so it is consuming more time tableau is the tool where it will write all the SQL commands in the background of the tool where you just have to drag and drop the data. Tableau makes it build beautiful, interactive, visualization from raw data. Tableau is the leading powerful data visualization tool which was founded in the year 2003.

Tableau helps to create data that can be understood by the professionals in the organization. Moreover, it allows non-technical users to contrive dashboards. Comes in different versions such as the tableau server, tableau cloud, and desktop.



Tableau is flexible to use because we work on a lot of different sources. Less time-consuming tool because we can make effective dashboards within hours or days instead of weeks. It connects and extracts data stored in various places. The main uses of this tableau are it can manage the large size

of metadata, creates no-code data queries, Query translation into visualization, and Import large size of data.

Best features of tableau

- ☐ Real-time analysis
- ☐ Data Blending
- ☐ Collaboration of data

The main thing to say about this tableau tool is there is no need to learn any technical or programming languages to operate. The tool has gathered interest among people from all regions such as businesses, researchers, and different industries.

Overall tableau is great because it frames business questions you want to answer, import and clean data, analyze and visualize data, makes business decisions, and presents insights all within one tool. Data analysts, Business analysts, and Analytics consultants basically who want to analyze or visualize are benefiting from using tableau.



M.Varsha Sri

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MSc Data Science-2

***One child,
one teacher,
one pen and
one book
can change
the world.***

***- Malala
Yousafzai***

INTRODUCTION TO DATA SCIENCE

Data Science is an integrative academic field that uses statistics, scientific computing, scientific styles, processes, algorithms, and systems to prize meaningful perceptivity for business. It's used to examine large quantities of data. Data Science is essential because it combines styles, tools, and technology to make data meaningful.

It's used to dissect data in 4 main ways:-

⇒ Descriptive Analysis.

It examines data to gain perceptivity into what happened or what's passing in the data terrain. It's portrayed by data visualizations similar to pie maps, bar maps, line graphs, tables, etc. The stylish everyday illustration would be a flight booking service that records data like the number of tickets reserved daily.

⇒ Individual Analysis.

Individual Analysis is a comprehensive examination to understand why a situation has taken place. It's characterized by ways similar to data mining, data discovery, correlations, etc.

⇒ Prophetic Analysis.

Prophetic Analysis makes use of literal data to give precise vaticinations regarding data patterns that may do in the future. It's characterized by ways similar to machine literacy, pattern matching, and prophetic modeling.

⇒ Conventional Analysis.

Conventional Analysis takes prophetic data to the coming position. It predicts what likely will be and gives an optimum response to the outgrowth. It uses graph analysis, simulation, complex event processing, neural networks, etc.

The colorful benefits of data wisdom include –

1. It's in great demand – It's the swift-growing job on LinkedIn and is believed to produce 11.5 million jobs by 2026.
2. Data Science is flexible – It's considerably used in banking, health care, consultancy services, and e-commerce diligence.
3. A Cornucopia of Positions – Data Science is a largely abundant field with many openings.
4. Data Science makes Data superior – Data Science not only explores the data but also enhances its quality.



A. Shruti

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B.Sc BC.CA.C (3F)

EDGE COMPUTING

Edge computing is a distributed information Technology[IT] architecture in which information processing is positioned near the edge. So they could deliver data to and receive instructions and download software from a centrally located data center or cloud.

Why Edge computing?

As the data is the lifeblood of modern business. It brings data storage and processing close to where data is being generated. It will deploy the services at the edge seamlessly and reliably by maintaining flexibility. It is more secure than cloud computing as there is no need to transfer data. Thus no fear of data loss while moving from edge to cloud. Thus it provide faster insights and business benefits, reduces response time, and improves the overall services. Therefore, edge computing is a trending keyword in the coming technology which gained notice with the rise of IOT. It enables us to assign workloads to various machines rather than depending a single system to deal with never-ending traffic from numerous devices.

Benefits :

1. Security of Data
2. Reduced Latency
3. Offline Capabilities

Applications :

1)The Manufacturing industry in edge computing helps to prevent any side effects in the first stage. Generally, every machine helps to track data patterns and make their decision more precise. while happening we face the problem on a massive amount of data that is overloaded on a central server. Which comes to the edge helps to clean the data the edge and send data to the cloud. which reduces the burden on a cloud.

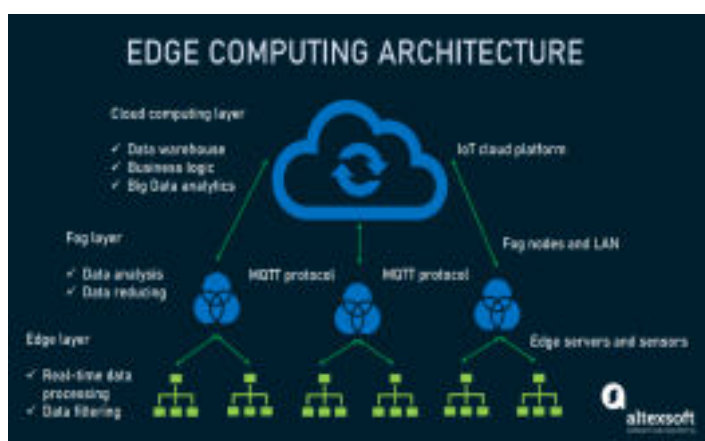
2)The Healthcare industry brings more efficiency and accuracy like when a person travels from to hospital in an ambulance condition. Transmitting patient data in that condition is difficult to send to the cloud is very difficult. EDGE helps to process and analyze data on spot and take recommended actions.



D.Mounika

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MSC DATA SCIENCE



THE METAVERSE: A DIGITAL UNIVERSE OF BOUNDLESS POSSIBILITIES

⇒ Introduction:

⇒ The concept of the metaverse has gained significant traction in recent years, captivating the imagination of tech enthusiasts and innovators alike. Coined by Neal Stephenson in his 1992 novel "Snow Crash," the metaverse refers to a virtual reality space where users can engage with a variety of digital experiences and interact with one another in real time. Far from a distant dream, the metaverse is rapidly evolving into a tangible reality, offering endless possibilities across various domains

⇒ Exploring the Metaverse:

⇒ The metaverse is poised to revolutionize the way we live, work, and play. With its immersive, interconnected nature, it has the potential to redefine social interactions, entertainment, education, and commerce. Users can create personalized avatars, navigate vast virtual landscapes, and engage in shared experiences with others across the globe.

⇒ In the metaverse, individuals can attend virtual meetings, collaborate on projects, and explore educational content in ways never before imagined. Entertainment experiences are elevated through interactive storytelling and virtual events, blurring the lines between reality and the digital realm.

⇒ Economic Opportunities

⇒ The metaverse also presents exciting economic opportunities. Virtual marketplaces enable users to buy and sell digital assets, such as virtual real estate, fashion items, and artwork. Brands can establish a presence in the metaverse, creating unique experiences for their customers and opening up new revenue streams.

⇒ Challenges and Considerations:

⇒ While the metaverse promises a host of benefits, there are challenges to overcome.



Priyanshi Singh

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***Hard work never
brings fatigue, it
brings
satisfaction. -
PM Narendra
Modi***

UNVEILING THE POWER OF BIG DATA ANALYTICS

Introduction :

In today's digital era, the proliferation of data has become unprecedented. Organizations across industries are recognizing the immense potential of big data analytics to gain valuable insights, make data-driven decisions, and drive innovation. This article explores the transformative impact of big data analytics and its growing significance in the modern world.

Harnessing the Power of Data : Big data analytics refers to the process of analyzing vast and complex datasets to uncover patterns, correlations, and actionable insights. By utilizing advanced technologies and algorithms, organizations can derive meaningful information from diverse sources such as social media, customer interactions, sensors, and more. This wealth of information enables businesses to gain a deeper understanding of their customers, streamline operations, optimize processes, and identify new growth opportunities.

Enhanced Decision Making : Big data analytics empowers organizations to make informed and data-driven decisions. By leveraging sophisticated analytical tools, organizations can identify trends, predict customer behaviour, optimize pricing strategies, and personalize customer experiences. Furthermore, big data analytics enables real-time monitoring and analysis, allowing businesses to respond swiftly to market changes and make agile decisions to stay competitive in dynamic environments.

Driving Innovation : Big data analytics serves as a catalyst for innovation and transformation. It helps organizations identify emerging trends, uncover untapped market segments, and develop breakthrough products and services. By leveraging big data, businesses can gain a comprehensive understanding of their target audience, anticipate their needs, and create customized offerings. Additionally, big data analytics fuels research and development initiatives by providing valuable insights, facilitating experimentation, and enabling data-driven iterations.

Conclusion :

In today's data-driven world, big data analytics has emerged as a game-changer for organizations. By harnessing the power of data, businesses can unlock valuable insights, make informed decisions, and drive innovation. The continued advancements in technology and analytics capabilities will further amplify the transformative potential of big data analytics, enabling organizations to stay ahead in an increasingly competitive landscape.



S. Tejaswini

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MSc CS

The way to get started is to quit talking and begin doing.

-Walt Disney

NEURAL NETWORKS

Neural networks are machine learning algorithm that is based on the concept of the human brain. Networks are made up of layers of interconnected nodes that means it acts like neurons that work together to process and analyze data. It is also known as artificial neural networks (ANNs) or sometimes also referred to simulated neural networks (SNNs)

The first layer of a neural network is the input layer, which receives data from an external source, such as an image or a sound recording. The data is then passed through one or more hidden layers, which perform calculations and identify patterns in the data. Finally, the output layer produces a prediction or decision based on the input data.

One of the key benefits of neural networks is their ability to learn from data. During the training process, the network adjusts the strengths of the connections between neurons to improve its ability to make accurate predictions or decisions. This process is known as "backpropagation," and it allows the network to improve its performance over time.

Neural networks have been used in a variety of applications which includes robotics, telecommunication, image and speech recognition, natural language processing, analyse healthcare and even playing games like chess and Go. They have also been used in business such as in marketing sales, financial forecasting, and autonomous vehicles.

While neural networks have shown great promise in many areas, they are not without their limitations. They require large amounts of data to train, and they can be computationally expensive. Additionally, it also require lot of time, they can be difficult to interpret, which can make it challenging to understand how they arrived at a particular decision.

Despite these challenges, neural networks are an important area of research in artificial intelligence, and they are likely to play a significant role in shaping the future of technology.



Qursheed Begum

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BSC MPSC 3B

ONLINE LEARNING

Online learning or E-learning has a wide range of processes that includes virtual classes that are received and sent through the Internet, video, and sometimes audio tapes. We can term it as electronic means of education and teaching. Online learning is one of the most common forms of learning. Due to COVID-19 online classes were conducted worldwide for all the students. Online classes were held to not waste time during covid. Online learning helped bridge the gap that was caused in a student's academic life due to the virus. Smart classrooms are a product of the development and adoption of technology by the education sector. Students and teachers engage themselves in learning and doing new things with the systems and exploring the uses of computers. In the current developing world, technology has become a huge part of everyone's life in both the education sector and the economic sector.

E-learning is dynamic and effective. Technology advancement and application are inevitable.



But it also becomes increasingly complicated with time. This has compelled the need to create new education systems and web-based learning all around the globe. Different presentations and portable documents are used to help in the learning process. Proper time management and effective use of technology and the internet are the base for successful online learning.

Interaction in live and online classes differ: few situations are handled better electronically, while others are physical. Due to this reason, we cannot eliminate the idea of traditional classrooms. Smart learning has changed the perspective of people that effective learning can only happen in a physical class. As long as the objectives of learning are achieved both online and offline classes are good.

Online classes have both advantages and disadvantages. It depends on each person how he/she can use his or her system for studies or get distracted and use it for entertainment purposes. So with the right intention if one uses a computer that would

be very effective in his/her life.



Sarah Shaiju

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BSc MSCs 1D

*It is during our
darkest
moments that
we must focus to
see the light.*

-Aristotle

QUANTUM COMPUTING FUTURE: A GLIMPSE INTO A REVOLUTIONARY ERA

Quantum computing, a burgeoning field at the intersection of physics and computer science, promises to usher in a new era of computational power. With the potential to solve complex problems exponentially faster than classical computers, quantum computers hold immense promise for transforming industries, scientific research, and encryption methods.

1. Quantum Supremacy and Beyond : Quantum supremacy, the moment when a quantum computer outperforms classical supercomputers, has already been achieved. This milestone underscores the enormous computational potential of quantum systems. As researchers continue to refine and scale quantum technologies, we can expect even greater strides in computational power. Quantum computers have the potential to tackle problems that are currently intractable, opening up new possibilities for optimization, machine learning, and scientific discovery.

2. Transforming Industries : Quantum computing's impact on various industries is poised to be transformative. Optimization problems, such as route planning for logistics companies or portfolio management for financial institutions, can be solved more efficiently using quantum algorithms. Quantum machine learning offers accelerated training and inference processes, enabling enhanced predictive capabilities and more accurate models. Industries such as drug discovery, materials science, and climate modeling stand to benefit significantly from quantum simulations, accelerating scientific advancements and unlocking novel insights.

3. Securing the Quantum World : The rise of quantum computing also presents a challenge to classical encryption methods. Cryptographic systems that rely on mathematical problems, such as RSA and ECC, can be vulnerable to attacks from quantum computers. To ensure data security in the quantum era, researchers are actively developing quantum-resistant cryptographic algorithms. These new algorithms, based on different mathematical foundations, aim to withstand the computational power of quantum computers, providing a secure foundation for communication and data protection.

4. Technical Challenges and Progress : The path to realizing the full potential of quantum computing is not without hurdles. Quantum systems are highly sensitive to noise, errors, and environmental factors, making error correction and qubit stability critical areas of research. Scientists are making strides in improving quantum coherence, extending qubit lifetimes, and developing error-correcting codes. As technical challenges are overcome, the development of reliable and scalable quantum computers becomes increasingly feasible, bringing the quantum computing future closer to reality.

The future of quantum computing holds tremendous promise and potential. As researchers and industry leaders continue to push boundaries and address technical challenges, quantum computers will revolutionize industries, accelerate scientific discoveries, and reshape the way we approach complex problems. Collaboration and investment in quantum technologies are key to unlocking the full power of this groundbreaking field and propelling us into a new era of computation.



Y.Sowjanya Deekshitha

MSC CS

Many of life's failures are people who did not realize how close they were to success when they gave up.

-Thomas A. Edison

WIRELESS SENSOR NETWORKS (WSNS)

They are a revolutionary technology that has transformed the way we collect data and monitor the world around us. These networks consist of small, low-cost devices called wireless sensor nodes, which are equipped with sensors, microcontrollers and power sources.

MAIN PURPOSE

WSNs is to gather information about the physical environment. Each sensor node captures data such as temperature, humidity, light, sound, or motion. The microcontroller in the node processes this data allowing nodes to share information with each other or with a central base station. Each sensor node captures data such as temperature, humidity, light, sound, or motion. The microcontroller in the node processes this data allowing nodes to share information with each other or with a central base station.

WSNs are structured in a multi-tiered architecture. The sensor nodes collect data and transmit it to base stations within their communication range. Base stations act as intermediaries, relaying the data to a central server or cloud infrastructure. This central hub is responsible for aggregating, analyzing, and storing the collected data.

In healthcare, WSNs facilitate remote patient monitoring and asset tracking. They also contribute to the development of smart cities by monitoring traffic, managing energy consumption, and improving public safety. Despite their potential, WSNs face challenges. Energy efficiency, network scalability, security, and data management are areas of focus for researchers. Efforts are being made to develop energy-efficient protocols, robust security mechanisms, and scalable architectures.

The future of WSNs looks promising. Ongoing advancements in energy harvesting, and communication technologies will lead to smaller and more energy-efficient sensor nodes. Additionally, integrating artificial intelligence and machine learning will enable intelligent decision-making within the network.

Wireless sensor networks have revolutionized data collection. They have a wide range of applications and hold great potential for the future. With ongoing research and technological advancements, WSNs will continue to enhance our ability to understand and interact with the world around us.



N. Lakshmi Lavanya

Roll no: 121322030018

MSC. Data Science



ARTICLES FROM OTHER COLLEGE

COMPUTERS IN TODAY'S WORLD

Computers have become an integral part of modern society, revolutionizing the way we communicate, work, and access information. These electronic devices are capable of processing vast amounts of data at incredible speeds, performing complex calculations, and executing intricate tasks with precision. Through the combination of hardware components like processors, memory modules, and storage devices, along with sophisticated software systems, computers have evolved from room-filling machines to sleek, portable devices that fit in the palm of a hand. The advancement of technology has led to the development of various types of computers, including personal computers, laptops, tablets, and smart phones, each tailored to different user needs. The concept of interconnected computers, known as the Internet, has further transformed



how we share information globally and engage with the **digital world**. As technology continues to progress, **quantum computers** on the horizon promise to revolutionize computing once again, solving problems previously deemed insurmountable. In essence, computers have reshaped the fabric of society, enhancing efficiency, enabling innovation, and connecting people in ways that were once thought impossible.



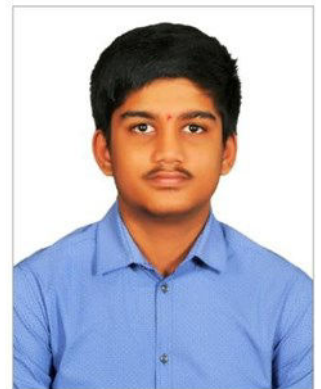
B. Sai Vinith Reddy,
B.Tech 1st Year,
Kakatiya Institute
Of Technology and
Science, Warangal.

WHY COMPUTER SCIENCE DEGREE IS OVERHYPED

Why computer science is overhyped, well in India an average of 3-4 lakh IT engineers pass out every year. just 1 lakh get decent employment. Many pupils lack the skills needed to survive in the IT business. The opportunities are getting worse and there are more layoffs every year; in January 2023 alone, around 80k people lost their jobs. Approximately 6% of Google's workforce, or 12k employees, were let go. Nowadays, when a new phone is released, the improvements are minimal. The number of available positions is decreasing as fewer IT sectors demand upgrades as it was a decade ago, For instance, the Samsung S23 Ultra and Samsung S22 Ultra should be of a different generation, but the difference is negligible. AI technology in the field of software is



growing year after year. Jobs are also being replaced by new artificial intelligence services. Only 10% of students, specifically, make more than the going rate in the industry. Because of the intense competition, only the best can succeed. Finally, I recommend that only those who put in the most effort and are willing to make sacrifices pursue degrees in computer science. Others may give up.



B. Sai Vikram Reddy,
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TABLEAU – DATA VISUALIZATION TOOL

Tableau is a data visualization tool. Data Visualization is the process of converting raw data into easily understood pictures of information that enable fast and effective decisions. It is an advance BI tool (BI- Business Intelligence). It was purchased by Salesforce company. It's latest version is 2022.4.

In short,

Raw data — Visual data operations

In today's business world, data is the most valuable asset a company can leverage for growth. Visual representations are much easier for non-tech experts to understand than raw data, and visualization functions of BI software can significantly speed up analytical processes. Compared to old-fashioned reporting tools like Microsoft Excel, Tableau and other similar software vendors provide superior insights at speed, freeing up decision-makers to do the work they do best.

Using a BI tool like tableau is a fast and effective way of simplifying raw data. These huge data sets are unintelligible for most people who aren't developers or computer scientists. Tableau simplifies data analysis by generating a dashboard that incorporates visual representations of different raw data sets. Users define the reports they want to view or download, and Tableau BI software creates a personalized dashboard for their company's defined goals and requirements.

Tableau's Applications:

- Data Visualization
- Business Intelligence
- Data Blending
- Data Mining
- Data collaboration
- Importing large data sets
- Managing large metadata
- Real time data analysis

Different types of Tableau Products:

- Tableau Public
- Tableau Desktop
- Tableau Server
- Tableau Online
- Tableau Reader
- Tableau Mobile

Tableau is attempting to tick all the boxes when it comes to reporting and analytics, with big plans for the future regarding augmented analytics and machine learning capabilities. One thing is for sure, the combined power of real-time business data and external data can provide SME operators with everything they need to make astute decisions that pay off.



Name : Kurakula Bhargavi

College Name : Maturi

Venkata Subba Rao

Engineering college

CYBERSECURITY TECHNOLOGIES

Cyber security is implemented everywhere which helps us to secure the data from different types of threats and viruses. We use cyber security in most of the institutes to protect data, devices, networks, programs from all types of cyber-attacks. Cyber security reduces cyber-attacks and protects data from users who are not authorized to access it. Cyber security is used by individuals, government, for profit companies and educational institutions to protect sensitive data. It reduces risks in IT Companies.

The different technologies of Cyber security are Artificial Intelligence which is used to program machines that can think like humans and perform actions, Internet of Things which is a large network used to connect device with Internet and other devices, Blockchain which is set of transactions that are duplicated and distributed across the whole network securing messaging, Cloud Computing that stores files in cloud storage on a remote database and the other technologies in cyber security are Firewalls, Web security, Data loss prevention and encryption, Application security, Intrusion Detection and Prevention System.



Name: Riya Dande

College: G. Narayanamma
Institute of Technology Science (for Women),



ALUMNAE TALK

“FRANCIS” a place of opportunities, ideas and growth, has given me immense of learning and character to build on. Being a part of this prestigious institution, it has shown me the way to live my purpose and stand firm in the society of competition. Going back the line, I remember the most exciting classes were the computer classes; the subject was named as Data Analysis. We had a very sweet lecturer who made our learning fun and understandable.

Our lab visits, assignments, making reports, graphs, etc were quite innovative. Every subject and the lecturer has taught us the way we organize our learning pattern and writing in a better way. I am very thankful for my college for giving me multiple opportunities to learn and experience through events, workshops, guest lectures and amazing classes. We have passed on from our college life by taking a bag full of memories of guidance, learning's, leadership, confidence and lot of wisdom. I wish that all the upcoming batches have many more inspirational journeys' to accomplish and share with everyone.

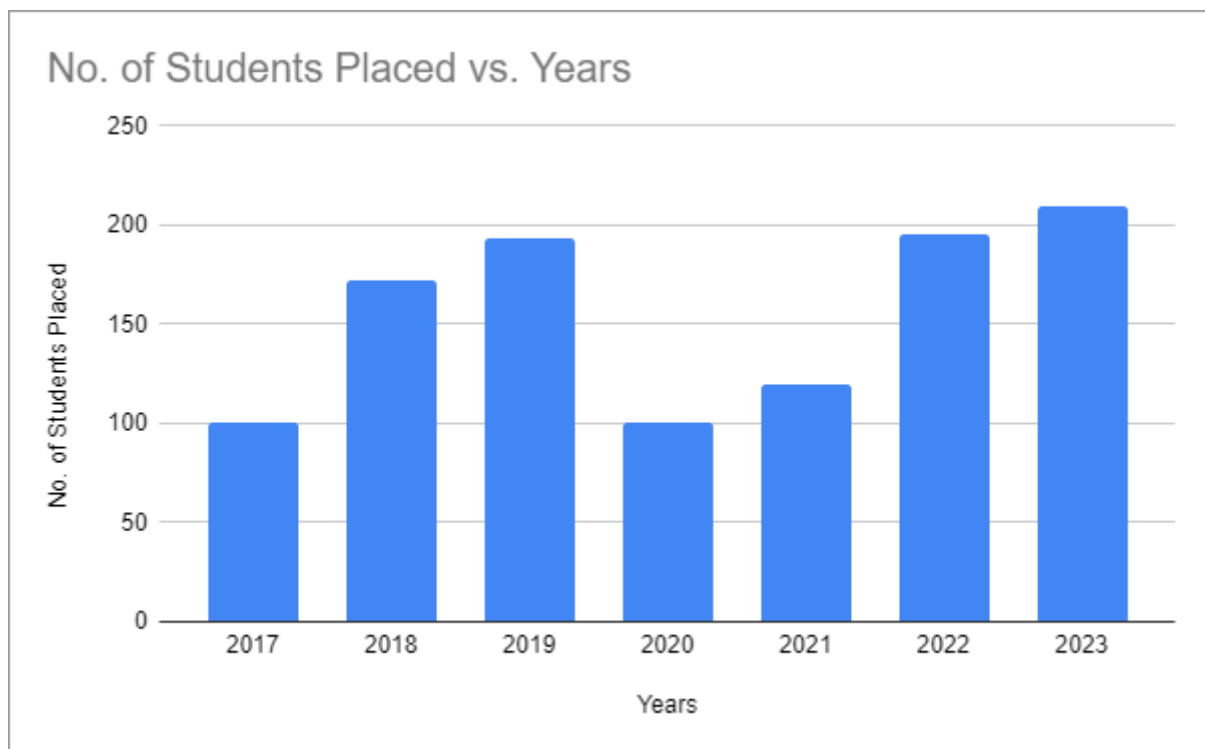
**P. LEENA MARGARET****B.COM (IB)****2021 – 2023****ROLL NO – 121320082036**

PLACEMENT INFORMATION

St. Francis college placement cell provides a launch pad for students to make it to the best organizations in the fields of software, core industries, management, etc. The biggest names in the corporate world visit the campus on a regular basis, with enviable recruitment offers.

Our students have lived up to the expectations of organizations that visit the campus, looking for bright candidates to take up important and challenging responsibilities at their workplace. Over the years, students have maintained good and strong placement record with placements with Industries across the country such as

- Cognizant Technology Solutions,
- Tata Consultancy Services
- Deloitte
- Capgemini
- Verizon
- Providence Global centre etc.



DEPARTMENT OF COMPUTER SCIENCE

The department was established in 1988, an iconic year in the lifeline of St. Francis College as it marks the grant of autonomy to the college. Computer Science is an interdisciplinary field and it is as much about teaching and learning of computer science as it is about the areas that impact on computer science – mathematics, linguistics, natural sciences, psychology, philosophy and how they interrelate with the theory and practice of education. Highly qualified and dedicated teaching faculty supported by equally able and competent lab faculty are the strength of the department. The college has hi-tech state of the art computer labs with over 400 high end computer terminals facilitated with high-speed internet access and connected to Linux and Windows servers equipped with all the required licensed software.

The department offers an assortment of programs at the undergraduate level, M.Sc. Computer Science and M.sc Data science at the postgraduate level and CCNA certification course. While we believe man is still the most extraordinary computer of all, we endeavour to provide the best possible exposure and training to the students, making them strong to face the IT challenges of the world.