Xavier Institute of Engineering

A SISTER INSTITUTE OF ST XAVIER'S COLLEGE, MUMBAI

# MONTHLY INSIGHTS

## JANUARY 2024

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**DEPARTMENT OF INFORMATION TECHNOLOGY**

## Departmental Vision statement of Information Technology

To nurture the joy of excellence in the world of Information Technology

## Departmental Mission statements of Information Technology

M1: To develop the critical thinking ability of students by promoting interactive learning.

M2: To bridge the gap between industry and institute and give students the kind of exposure to the industrial requirements in current trends of developing technology.

M3: To promote learning and research methods and make them excel in the field of their study by becoming responsible while dealing with social concerns.

M4: To encourage students to pursue higher studies and provide them awareness on various career opportunities that are available.

## Program Educational Objectives (PEOs)

PEO1: Information Technology Engineering Graduates shall be employed as IT Professionals, and shall engage themselves in learning, understanding and applying newly developed ideas and technologies as their field of study evolves.

PEO2: information Technology Engineering graduates shall be competent to use the learnt knowledge successfully in the diversified sectors of Industry, academia, research and work effectively in a multi-disciplinary environment.

PEO3: Information Technology Engineering Graduates shall be aware of professional ethics and create a social responsibility in the building the nation/society.

## Program Specific Outcomes (PSOs)

Student will be able to :

PSO1 : Demonstrate the ability to analyze and visualize the business domain and formulate appropriate information technology solutions.

PSO2: Apply various technologies like intelligent systes, Data mining, IOT, Cloud and Analytics,Computer and Network Security etc. for innovative solution to real time problems.

# INDEX

# ARTICLES

## New trends/ Current trends in IT

In the dynamic landscape of information technology, several key trends have been shaping the industry up until my last knowledge update in January 2022. Artificial Intelligence (AI) and Machine Learning (ML) have been at the forefront, making significant strides across various sectors such as healthcare, finance, and customer service. Conversational AI and natural language processing have gained traction, revolutionizing customer interactions and support systems.

Edge computing has emerged as a crucial trend, addressing the need for faster data processing and reduced latency, particularly in the context of the Internet of Things (IoT). The continuous rollout and adoption of 5G technology have promised enhanced wireless communication, fostering advancements in connectivity and supporting technologies like augmented reality (AR) and virtual reality (VR).

The ever-growing threat landscape has emphasized the importance of cybersecurity. Zero-trust security models, multi-factor authentication, and advanced threat detection have been focal points in safeguarding digital assets and infrastructure. Cloud computing has continued its upward trajectory, with businesses leveraging cloud services for scalability, flexibility, and cost-efficiency. Hybrid and multicloud approaches have become more prevalent, offering organizations a balance between performance and compliance.

Blockchain technology has extended its reach beyond cryptocurrencies, finding applications in supply chain management, healthcare, and finance. Cryptocurrencies like Bitcoin and Ethereum have remained in the spotlight, serving not only as investments but also as innovative financial instruments.

Quantum computing, though still in the experimental stage, has shown promise in tackling complex problems beyond the capabilities of classical computers. The COVID-19 pandemic has accelerated the adoption of remote work technologies, including video conferencing, collaboration tools, and virtual private networks (VPNs). This shift towards remote work has brought forth new challenges and opportunities for technology solutions that support a distributed workforce.

Finally, there has been a growing emphasis on sustainable IT practices. Initiatives to create energy-efficient data centers, responsible e-waste management, and green computing have gained momentum, reflecting the industry's commitment to reducing its environmental impact. As the IT landscape evolves, it is essential to stay updated on these trends and be prepared for emerging technologies that will shape the future of information technology.

Samuel Pallikonda

TE IT

## Unveiling the Technological Renaissance: A Journey Through Current Technological Innovations

In an era defined by rapid advancements and groundbreaking discoveries, the world finds itself at the forefront of a technological renaissance. From the palm of our hands to the vast expanse of outer space, innovation knows no bounds, reshaping industries, transforming societies, and redefining the very fabric of human existence. Let us embark on a journey through the currents of modern technology, exploring the awe-inspiring innovations that are propelling humanity into the future.

**Pioneering the Age of Intelligent Machines:**

Artificial Intelligence (AI) stands as the cornerstone of the digital revolution, empowering machines with cognitive abilities once reserved for the human mind. Machine learning algorithms analyze vast troves of data, discerning intricate patterns and insights to inform decision-making processes. From virtual assistants and recommendation systems to autonomous vehicles and medical diagnostics, AI permeates every aspect of our lives, augmenting human capabilities and revolutionizing industries with unprecedented efficiency and accuracy.

**Connecting the World in a Web of Possibilities:**

The Internet of Things (IoT) heralds a new era of connectivity, where billions of devices communicate seamlessly to create a vast ecosystem of interconnected systems. Embedded with sensors and actuators, everyday objects become intelligent nodes in a network, gathering data, and facilitating real-time interactions. Smart cities optimize resource utilization and enhance urban living standards, while wearable devices monitor health metrics and promote personalized wellness.

**Building Trust in a Decentralized World:**

Blockchain technology emerges as a beacon of transparency and trust in an increasingly digital landscape. By decentralizing data storage and employing cryptographic techniques, blockchain platforms ensure the integrity and immutability of information, free from tampering or manipulation. Beyond cryptocurrencies, blockchain finds applications in supply chain management, digital identity verification, and secure voting systems, fostering greater accountability, efficiency, and inclusivity across diverse domains.

**Harnessing the Power of Nature:**

Renewable energy solutions offer a sustainable alternative to traditional fossil fuels, mitigating environmental degradation and combating climate change. Solar, wind, and hydroelectric power harness the inexhaustible energy of the sun, wind, and water, providing clean and renewable sources of electricity. Breakthroughs in energy storage technologies, such as lithium-ion batteries and hydrogen fuel cells, address the intermittency of renewable sources, unlocking the full potential of a green energy revolution and paving the way towards a carbon-neutral future.

**Empowering a Hyperconnected World:**

The advent of 5G wireless technology heralds a new era of connectivity, characterized by blazing-fast data speeds, ultra-low latency, and unprecedented network capacity. With 5G networks, the Internet of Things becomes more pervasive, enabling innovations such as autonomous vehicles, remote surgery, and smart infrastructure. As 5G continues to expand globally, it unlocks new opportunities for communication, collaboration, and innovation, catalyzing the development of transformative technologies and driving economic growth on a global scale.

**Conclusion:**

In conclusion, the currents of modern technology propel humanity towards new frontiers of possibility, unleashing innovation, fostering collaboration, and transcending the boundaries of imagination. As we navigate the ever-evolving landscape of technological progress, let us embrace the opportunities presented by emerging technologies, harnessing their power to address global challenges, promote sustainability, and enhance the human experience for generations to come.

## Exploring the Unique Advantages of Human Intelligence over AI in IT Engineering

Inthe rapidly evolvinglandscape of technology and artificial intelligence (AI), there's an ongoing discourse about the capabilities of humans versus those of machines. While AI continues to advance in remarkable ways, it's essentialto recognize the distinctive strengthsthat humans bring to the table, particularly in the field of IT engineering.

Creativity is a hallmark of human intelligence that sets us apart from AI systems.In the realm of IT engineering, creativityfuels innovation, drives problem-solving, and fosters the development of groundbreaking solutions. Whether it's designing intuitive user interfaces, conceptualizing novel algorithms, or envisioning disruptive technologies, human creativity remains unparalleled. While AI can assist in automating certain tasks and generating insights from data, it often lacks the imaginative spark that humans possess.Emotional intelligence is another vital aspect of human cognitionthat profoundly influences our interactions and decision-making processes. In IT engineering, effective collaboration, communication, and leadership are essential for project success.Human engineers can empathize with end-users, understandtheir needs, and tailor solutions to meet those requirements. Moreover, navigating complex team dynamics, resolving conflicts, and inspiring colleagues require emotional intelligence– a trait that AI systemshave yet to fully emulate.

Contextual understanding plays a pivotalrole in IT engineering, where projects often operate within diverse cultural, social, and organizational contexts.

Human engineers possess the cognitive flexibility to adapt to varying environments, interpret subtle nuances, and tailor solutions accordingly. Whether it's understanding user preferences, deciphering business requirements, or anticipating market trends, human intuition and contextual awareness are indispensable assets in the IT landscape.

Adaptability is another inherent trait of human intelligence that distinguishes us from AI systems. In an era characterized by rapid technological advancements and paradigm shifts, IT engineers must continually learn, evolve, and embrace new methodologies and tools. Humans have the capacity to absorb knowledge from diverse sources, apply critical thinking skills, and adapt to evolving circumstances– a capability that enables them to thrive amidst uncertainty and complexity.

Ethical judgment is a cornerstone of human decision-making, especially in the realm of IT engineering, where the impact of technology on society is profound and far-reaching. From data privacy and cybersecurity to algorithmic bias and responsible AI deployment, ethical considerations permeate every facet of IT engineering. Human engineers can discern ethical dilemmas, weigh moral implications, and advocate for principles of fairness, transparency, and social responsibility– a dimension of intelligence that AI systems inherently lack.

Physical dexterity, while often overlooked in the realm of IT engineering, remains a distinctive advantage of human intelligence. From assembling hardwarecomponents to conducting fieldwork and troubleshooting technical issues, human engineers leveragetheir physical capabilities to execute tasks that require manual dexterity and sensory perception– areas where AI systemsare still nascent.

In conclusion, while AI continues to redefine the boundaries of technological innovation, it's imperative to acknowledge the irreplaceable role of human intelligence in IT engineering. From creativity and emotional intelligence to adaptability and ethical judgment, humans possess a unique constellation of qualities that augment and complement the capabilities of AI systems. By harnessing the collective power of human ingenuity and technological prowess, IT engineers can navigate the complexities of the digital age and pave the way for a more inclusive, ethical, and sustainable future.

NIKHIL CHILIVERI

SE IT

## The Impact of Artificial Intelligence on Healthcare

Artificial intelligence (AI) and related technologies are increasingly prevalent in business and society and are beginning to be applied to healthcare. These technologies have the potential to transform many aspects of patient care, as well as administrative processes within providers, payers, and pharmaceutical organizations. There are already several research studies suggesting that AI can perform as well as or better than humans at key healthcare tasks, such as diagnosing disease. Today, algorithms are already outperforming radiologists at spotting malignant tumors and guiding researchers in how to construct cohorts for costly clinical trials.

Artificial intelligence is not one technology, but rather a collection of them. Most of these technologies have immediate relevance to the healthcare field, but the specific processes and tasks they support vary widely. Some particular AI technologies of high importance to healthcare are defined and described below:

## Machine learning – neural networks and deep learning

In healthcare, the most common application of traditional machine learning is precision medicine – predicting what treatment protocols are likely to succeed on a patient based on various patient attributes and the treatment context. Most machine learning and precision medicine applications require a training dataset for which the outcome variable (eg onset of disease) is known; this is called supervised learning. A more complex form of machine learning is the neural network – a technology that has been available since the 1960s and has been well established in healthcare research for several decades3 and has been used for categorization applications like determining whether a patient will acquire a particular disease. It views problems in terms of inputs, outputs, and weights of variables or 'features' that associate inputs with outputs.

## Natural language processing

Making sense of human language has been a goal of AI researchers since the 1950s. This field, NLP, includes applications such as speech recognition, text analysis, translation and other goals related to language. In healthcare, the dominant applications of NLP involve the creation, understanding and classification of clinical documentation and published research. NLP systems can analyse unstructured clinical notes on patients, prepare reports (eg on radiology examinations), transcribe patient interactions and conduct conversational AI.

## Physical Robots

Physical robots are well known by this point, given that more than 200,000 industrial robots are installed each year around the world. Surgical robots, initially approved in the USA in 2000, provide ‘superpowers’ to surgeons, improving their ability to see, create precise and minimally invasive incisions, stitch wounds and so forth.6 Important decisions are still made by human surgeons, however. Common surgical procedures using robotic surgery include gynaecologic surgery, prostate surgery and head and neck surgery.

## Robotic Process Automation

This technology performs structured digital tasks for administrative purposes, ie those involving information systems, as if they were a human user following a script or rules. Compared to other forms of AI they are inexpensive, easy to program and transparent in their actions. Robotic process automation (RPA) doesn't really involve robots – only computer programs on servers. It relies on a combination of workflow, business rules and ‘presentation layer’ integration with information systems to act like a semi-intelligent user of the systems. In healthcare, they are used for repetitive tasks like prior authorisation, updating patient records or billing. When combined with other technologies like image recognition, they can be used to extract data from, for example, faxed images in order to input it into transactional systems.

**Diagnosis and treatment applications**

Diagnosis and treatment of disease has been a focus of AI since at least the 1970s, when MYCIN was developed at Stanford for diagnosing blood-borne bacterial infections. More recently, IBM's Watson has received considerable attention in the media for its focus on precision medicine, particularly cancer diagnosis and treatment.

**Patient engagement and adherence applications**

Patient engagement and adherence have long been seen as the 'last mile' problem of healthcare – the final barrier between ineffective and good health outcomes. The more patients proactively participate in their well-being and care, the better the outcomes – utilization, financial outcomes, and member experience. These factors are increasingly being addressed by big data and AI. Providers and hospitals often use their clinical expertise to develop a plan of care that they know will improve a chronic or acute patient's health. However, that often doesn't matter if the patient fails to make the behavioral adjustment necessary, eg losing weight, scheduling a follow-up visit, filling prescriptions, or complying with a treatment plan. Noncompliance – when a patient does not follow a course of treatment or take the prescribed drugs as recommended – is a major problem.

**Personalized Treatment**

AI algorithms can analyze vast amounts of patient data to develop personalized treatment plans based on individual genetics, medical history, and lifestyle factors. This tailored approach can lead to more effective treatments and better outcomes.

**Ethical and Regulatory Considerations**

As AI becomes more integrated into healthcare, ethical considerations around data privacy, algorithm bias, and patient consent become increasingly important. Regulatory frameworks must evolve to ensure the responsible development and deployment of AI technologies in healthcare.

**Challenges and Limitations**

Despite its potential, AI in healthcare faces challenges such as data quality and interoperability, physician acceptance and trust, and the need for robust validation and regulation to ensure patient safety.

Shravani Jadhav
SE IT

# Metaverse

**Introduction :**

The metaverse is a collective virtual shared space, created by the convergence of virtually enhanced physical reality and physically persistent virtual reality. It's a concept where users can interact with a computer-generated environment and other users in real-time, often through immersive technologies like virtual reality (VR) or augmented reality (AR). It goes beyond just a virtual world, encompassing interconnected virtual spaces, economies, and social experiences. Essentially, it's a digital universe where people can work, play, and socialize in a variety of virtual environments.

**Evolution from the Internet to Metaverse :**

The evolution from the internet to the metaverse is essentially a transition from static information exchange to immersive, interactive digital experiences.

**Key Components of Metaverse :**

- Augmented reality (ar ) and virtual reality (vr)

Virtual Reality (VR) and Augmented Reality (AR) are the key components of the metaverse. VR immerses users in entirely virtual environments, while AR overlays digital content onto the real world. Both technologies play crucial roles in creating immersive, interactive experiences within the metaverse, allowing users to interact with digital environments and other users in real-time. Additionally, other key components of the metaverse include user-generated content, persistent virtual spaces, social interaction, digital economies, and interoperability across platforms and devices.

- Ai and its role in metaverse :

Artificial Intelligence (AI) in the metaverse enhances user experiences, creates dynamic content, facilitates realistic interactions through NPCs, enables natural language communication, assists in content creation, and provides virtual assistance

**Challenges and future of metaverse :**

- Addressing Crime and Ethical Concerns:

**Virtual Crime:** With the metaverse's immersive nature, there's a risk of virtual crimes such as theft, fraud, harassment, and even virtual property damage. Law enforcement and platform developers will need to establish protocols and technologies to address and prevent such crimes.

**Ethical Considerations:** As the metaverse blurs the lines between reality and virtuality, ethical concerns arise regarding privacy, consent, and appropriate behavior. Policies, guidelines, and user education are essential to promote ethical conduct and protect users' rights within virtual environments.

**Ownership and Portability of Visual Representation:**

**Digital Identity:** Users' digital identities, including avatars and virtual possessions, raise questions about ownership and portability.

Ensuring users have control over their digital assets and can transfer them seamlessly between platforms will be crucial for fostering trust and enabling a vibrant digital economy.

**Interoperability:** Achieving interoperability standards for digital assets and avatars across different metaverse platforms will facilitate portability and enhance user experiences. This involves collaboration among platform developers and adherence to open standards for asset representation and transfer.

In the future, overcoming these challenges will be essential for realizing the metaverse's full potential. With effective governance, technological innovation, and user empowerment, the metaverse holds promise for revolutionizing entertainment, social interaction, education, and commerce on a global scale.

# AI and No code tools

**Introduction :**

In today's rapidly evolving technological landscape, two trends are reshaping the way we approach software development and problem-solving: artificial intelligence (AI) and no-code tools. While AI continues to revolutionize various industries with its ability to automate tasks and derive insights from data, no-code tools empower individuals without programming expertise to create applications and solutions quickly and easily. The convergence of these two trends holds immense promise for democratizing innovation and fostering creativity across diverse domains.

**The Rise of No-Code Tools:**

No-code tools have gained significant traction in recent years, offering users the ability to build applications and automate processes without writing a single line of code. These platforms leverage intuitive visual interfaces and drag-and-drop functionality, enabling users to design workflows, create web applications, and automate tasks with minimal effort. From entrepreneurs and small businesses to large enterprises, no-code tools have become indispensable for accelerating digital transformation and streamlining operations.

Popular examples of no-code platforms include Bubble, Airtable, and Zapier, each catering to different use cases and industries. These tools empower users to prototype ideas rapidly, iterate on designs, and launch products without the need for extensive technical expertise.

Furthermore, the reliance on pre-built AI models raises ethical considerations regarding data privacy, bias, and transparency. Users must be mindful of the implications of AI-driven decision-making and ensure that their applications adhere to ethical standards and regulatory requirements.

**Future Trends and Opportunities:**
Looking ahead, the intersection of AI and no-code tools is poised to drive further innovation and transformation across industries. Future trends may include increased automation of complex tasks, democratization of AI capabilities, and the emergence of new application domains such as augmented reality (AR) and virtual reality (VR) experiences.

Moreover, as AI technologies continue to evolve, we can expect to see advancements in natural language understanding, computer vision, and predictive modeling, further enhancing the capabilities of no-code platforms. This opens up exciting opportunities for individuals and organizations to explore new frontiers and solve challenges in ways that were previously unimaginable.

**Case Studies and Examples:**
Numerous case studies illustrate the transformative potential of AI-driven no-code tools across industries. For instance, a small e-commerce startup used no-code platforms to build a personalized recommendation engine, resulting in a significant increase in sales and customer satisfaction. In another example, a healthcare organization leveraged AI-powered no-code tools to streamline patient intake processes and improve operational efficiency.

**Conclusion:**
In conclusion, the convergence of AI and no-code tools represents a paradigm shift in software development and problem-solving. By democratizing access to technology and empowering non-technical users to create intelligent solutions, these platforms are democratizing innovation and fostering creativity on a global scale

Siddhi Jadhav

FE IT

# EVENTS

**Spandan/Transmission Inauguration + Traditional Day**

Inauguration Ceremony and Traditional Day for Spandan & Transmission 2024 was held on 17th January 2024. It was a grant ceremony held in the presence of Fr(Dr.) John Rose and principal Y.D.Ventakesh. The event started with lamp Lighting and Ribbon cutting. Dhol-Tasha and Shiv garjana by students peaked up the energy of the event. After that, the team reveal of whole Spandan, Transmission and General team was done which was followed by dance by 2nd year students. Traditional day started after inauguration ceremony where students wore traditional attire.

Harshvardhan Gupta (General Secretary) & Shreya Jadhav (Asst. General Secretary) from IT department doing the ribbon cutting inauguration along with college management


Student Council

Dhol Tasha

Post Event Image

## Mumbai Mayanagari : Spandan 2023-24 Chronicles Art, Music, and Culture

Spandan, the cultural event hosted by Xavier Institute of Engineering in the academic year 2023-24, unfolded over three days, from the 18th to the 20th of January 2024. This meticulously organized event comprised a series of inter and intra-college competitions skillfully orchestrated by the Cultural Committee of Xavier Institute of Engineering, led by the Cultural Secretaries: Aryan Gonsalves, Rakshita Sarap, Samarth Chavan and Ceicilia Dinesh. The overarching theme for this year's extravaganza was "Mumbai Mayanagari."

Commencing on the first day, the event kicked off with an inter-college collaborative mural competition. Teams of four participants were tasked with creating a poster encapsulating the spirit of Mumbai under the theme "Mumbai Meri Jaan." Subsequently, a Scavenger Hunt unfolded, challenging groups of participants to engage in a variety of activities, meticulously documented as proof. Following this, the day featured a Monochromatic Masterpiece competition, wherein individual participants demonstrated their artistic prowess by creating drawings using a single colour shade.

The second day commenced with a riveting Debate Competition, titled "Mumbai Wants to Know," where pairs of participants engaged in thought-provoking discourse on assigned topics. A Genre Mashup competition ensued, where participants skillfully combined two genres to present captivating acts. The day also witnessed solo and group singing competitions, named Jugalbandi and Battle of Bands, wherein participants enthralled the audience with their musical talents, leaving a resonating impact.

On the final day of Spandan, the event opened with a Poetry Competition, titled "Tales of Mumbai," providing participants a platform to express their artistic sensibilities through the medium of verse. This was followed by a Pageant competition named "Persona," adding an element of glamour to the proceedings. The concluding segments included solo and group dance competitions, aptly titled "Nach Baliye," where participants showcased their exceptional dance talents, bringing the curtain down on a spectacular cultural celebration

**Winners of Competition :**

| Sr. No | Name of the Competition | 1st Prize | 2nd Prize |
|---|---|---|---|
| 1. | Collaborative Murals | Suwinsa Sahaya<br>Aditya Naik<br>Siddhesh Tambe | Merin Reji<br>Shantanu Shinde<br>Arfaat Hashmi |
| 2. | Scavenger Hunt | Yashika Gupta<br>Hamza Shaikh<br>Osama Shaikh<br>Anshuman Sharma | Saquib Khan<br>Soham Desai<br>Falguni Joshi<br>Bhanu Sunka |
| 3. | Monochromatic Masterpeice | Sarvesh Dabholkar | Shantanu Shinde |
| 4. | Mumbai wants to know | Vinesh Naik<br>Kshitij Chauhan | Atharva Ghodke<br>Nanditha Ramesh |

| Sr. No | Name of the Competition | 1st Prize | 2nd Prize |
|---|---|---|---|
| 5. | Genre Mashup | Ritik Raj<br>Tanmay Sawant<br>Shahnawaz Shaikh<br>Shantanu Ramteke | Pooja Raut<br>Cecilia Dinesh |
| 6. | Jugalbandi | Om Deshmukh | Aryan Surve |
| 7. | Battle of Bands | Saptak | Fun Bit Band |
| 8. | Mumbai wants to know | Siddhesh Navghare | Nandita Ramesh |
| 9. | Persona | Mr. Xaviers - Chirayu Desle | Ms. Xaviers - Unnati Helekar |
| 10. | Tie Dye | Yullete Alvares | Sakshi Pawar |
| 11. | Nach Baliye (Solo Dance) | Jhanvii Kotain | Mayuresh Balsaraf |
| 12. | Nach Baliye (Group Dance) | SE-IT Slayerz | Desiboyz |

**Event Photos :**

Event “Persona”


Event “Jugalbandi”


Event “Genre Mashup”

## Transmission 2024

Xavier Institute of Engineering celebrated its Annual Technical Fest, Transmission'2024, organized by the esteemed Technical Committee of the Student Council. The fest, spanning from January 18th to January 20th 2024, showcased the technical prowess and innovation of XIE students through a series of engaging events. The fest encompassed diverse categories, offering a platform for students to exhibit their talents and compete in various technical domains.

### a) Project Presentation:-

**1) Circuit Sammelan:** This event was the golden chance for XIE students to flaunt their technical masterpieces that they had meticulously crafted with unwavering dedication, hard work, and creative ingenuity. The judges were greeted at 11 am and they shortly started evaluating the projects of our participants. Subsequently, the final results were announced based on their scores. A total of 10 groups participated in this event.

**2) Coders ka Tyohaar:** This event provided a remarkable platform for XIE students to demonstrate their coding prowess before an attentive audience, fostering a dynamic showcase of technical talent and innovation.The judges were welcomed at 11 am and they almost immediately started assessing the projects of our participants. The final results were announced based on their scores. A total of 17 groups participated in this event

**b) Coding & Software:-**

**1)Humshakals:** Its is an Website Replicate Event where participants have to exactly replicate the website using HTML, CSS and JS event it was held on first day of Transmission from 2pm to 4pm. The project topic was provided to the students and they were given all the images and video animations that they will require for the replication of the website, the students coded on the IDE Visual Studio Code. The submission of the Project was taken just at 4 pm and then the judging was done, This was done by an alumni of the college who is currently working in the IT industry, Mr. Jayesh Jain, the project were judged on basis of various categories and the winners were announced.

**2)Building the Gateway:** It is an team based hackathon where team of maximum 4 participants were allowed and they have make full fledged applications which contain frontend backend and storage and it should be fully functional, this event was held on the 2nd Day of Transmission. In this event, A topic was given to the students which was Drug Deaddiction System, Students were free to use the coding languages they preferred whether Java, Python, JS, HTML, CSS, SQL etc. The event was scheduled from 11am to 4pm where the event was commenced by explaining the rules and regulations to the students and then the student started building the application. The projects were submitted by the time limit of 3:30 pm and then the judging began, the event was judged by an alumni of the college, Ms. Prathana Gupta who is currrently working with JIO Ghansoli as an Asst. Manager under team AIOPs. The judging was done based on overall outcome of the application including the Frontend & Backend. The winners were then announced and then a thanking speech was done for the alumni and the students.

**3)Treasure of the Arabian Sea:** It is team based event where team of 2 participants were allowed, It was open for students from all classes. It was conducted in 3 rounds and each round providing some points for the judging of the winners of the event. Round 1: where participants have to debug the code, Here students were given codes to debug; Round 2: consists of blind coding where there are pattern solving questions are provided; & Round 3: it is guesing the mobile using various clues, here the clues were of IQ and logic based questions. After the completion of the rounds, the winners of the event were declared as the first team to complete all the 3 rounds, and then the 2nd prize to 2nd team.

**c) <u>LAN Gaming</u>**:

**1)Valorant:** This event was an eSports Competition on Valorant, the event was conducted in 2 days i.e on 1st and 2nd Day of Transmission, the event was held in the college campus in Project Lab, here the students were provided all the tech equipments and a proper gaming setup was arranged by the Technical Committee of Student Council, The participants were in a team of 5. It was conducted in 3 rounds as for eliminations and deciding the ultimate winning team.

**2)BGMI:** This was an eSports LAN Gaming event scheduled on the 3rd Day of Transmission, in this event the participants were in a team of 4 students, the event was conducted in 2 rounds, The event commenced by explaining the rules and the points system for the event. The event was conducted in the Seminar Hall of the college. The winners were decided by the Points system shown at the start of the event by the Judging team. The winners were then announced and then the event commenced with a thanking message by the Technical Secretary.

**d)Recreational Events:**

**1)Buzzer ring:** This event is famously known as 'Dont Touch the Wire', in this event a setup was made the orgainzing committee students, which included a setup of cable sirens and an arduino sensor, this game was such that a loop of wire was made as a handle and the participants must pass the loop without touching the cable, if the loop comes in contact with the loop the sirens starts and the participant is OUT. This event was scheduled on the Turf, and the students participated. This was a event were the hand eye coordination and an mind refereshing event.

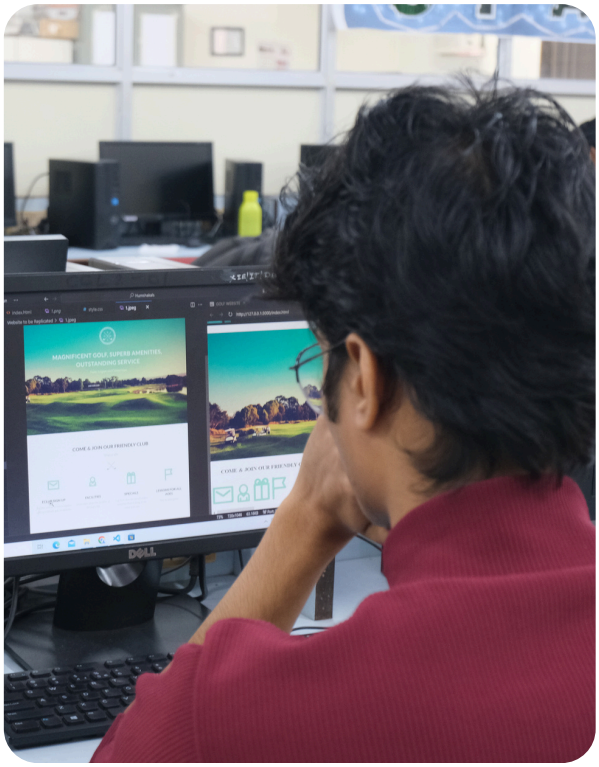
**2) RC Racing:** This activity was to show off one's skills in driving a RC i.e. Remote Controlled car. The event was scheduled on the college turf, where a setup of the RC track was build by the students of the Technical Committee of the Student Council, the participants task was to complete the RC track 3 loops within the given time limit of 5 minutes, the track was filled with sharp turns and obstacles to make it more challenging for the participants. It was a banger event and a large number of students participated in this event.

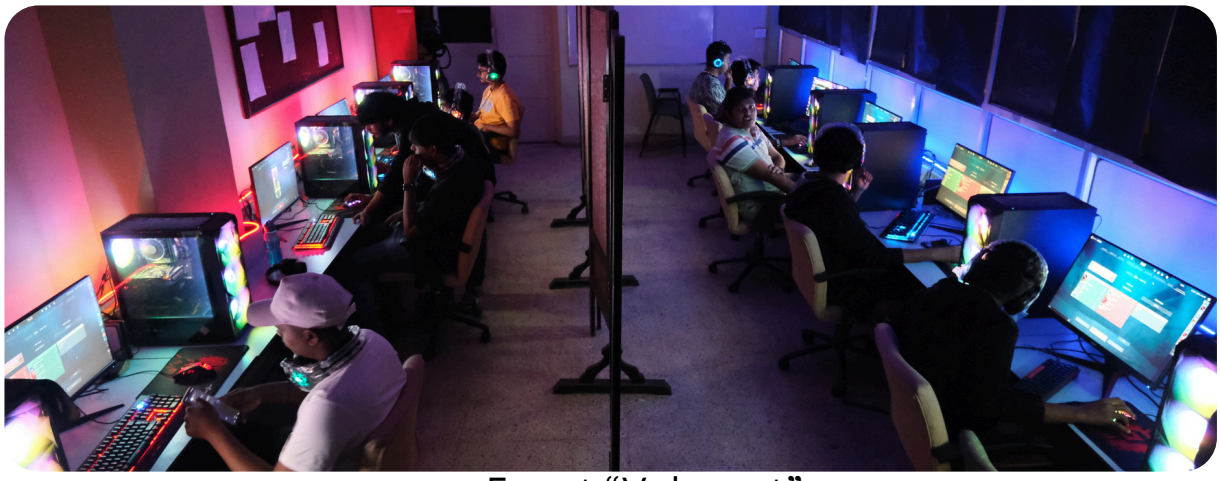
**e) Hardware & Robotics:**

**1) Agla St. Hardware Jn.:** The Agla Station Hardware Junction event, conducted on January 19, 2024, at 3rd floor, LH 8, proved to be a captivating platform for electronics enthusiasts to showcase their skills and knowledge. With 23 participants representing various branches, the event unfolded in three compelling rounds. Commencing with a cordial welcome and introduction session, organizers elucidated the event format, rules, and judging criteria. The subsequent rounds, namely Quiz Blast and Riddle Me This!, tested participants'

fundamental understanding and problem-solving abilities in the realm of electronics, narrowing down the field to the top contenders. The apex of the competition, Round 3: Circuit Showdown!, challenged participants to construct functional mini-circuits under time constraints and cryptic instructions, leading to the identification of two exceptional winners. Professor Stella J, the esteemed judge, meticulously evaluated the participant-built circuits, acknowledging exemplary creativity and craftsmanship. As the event culminated, organizers expressed gratitude to all participants for their enthusiastic engagement, fostering an environment of learning, competition, and camaraderie throughout the electrifying affair.

**Event Photos :**





Event “Valorant”

Event “Coders ka Tyohaar”

Event “Building the Gateway”

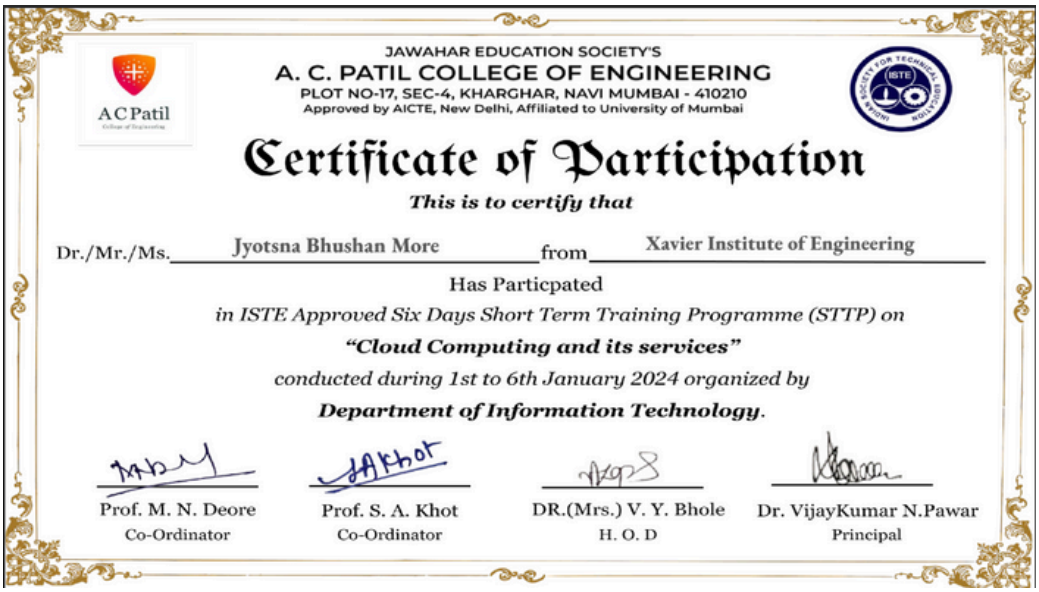
# FACULTY ACHIEVEMENTS

Prof. Jyotsna More, Assistant Professor of IT Department judged the competition “Coders ka Tyohaar” organized by Transmission 2024, Student Council, Xavier Institute of Engineering on 18th January, 2024.

Prof. Chhaya Narvekar, Assistant Professor of IT Department successfully completed an AICTE Training And Learning (ATAL) Academy Faculty Development Program on Artificial Intelligence and Machine Learning at MGM'S College of Engineering and Technology from 01-06 January 2024.

Prof. Stella J, Assistant Professor of IT Department judged the competition “Circuit Sammellan” & “Agla Station Hardware Junction” organized by Transmission 2024, Student Council, Xavier Institute of Engineering on 18th January, 2024 & 19th January, 2024 respectively.

Prof. Jyotsna More, Assistant Professor of IT Department participated in an ISTE-approved six-day short term training program (STTP) on “Cloud Computing and its services” organized by A.C. Patil College of Engineering, Kharghar from 01-06 January 2024.



JAWAHAR EDUCATION SOCIETY'S

A. C. PATIL COLLEGE OF ENGINEERING

PLOT NO-17, SEC-4, KHARGHAR, NAVI MUMBAI - 410210

Approved by AICTE, New Delhi, Affiliated to University of Mumbai

# Certificate of Participation

*This is to certify that*

Dr./Mr./Ms. Jyotsna Bhushan More from Xavier Institute of Engineering

Has Particpated

*in ISTE Approved Six Days Short Term Training Programme (STTP) on*

***“Cloud Computing and its services”***

*conducted during 1st to 6th January 2024 organized by*

***Department of Information Technology.***

| Prof. M. N. Deore | Prof. S. A. Khot | DR.(Mrs.) V. Y. Bhole | Dr. VijayKumar N.Pawar |
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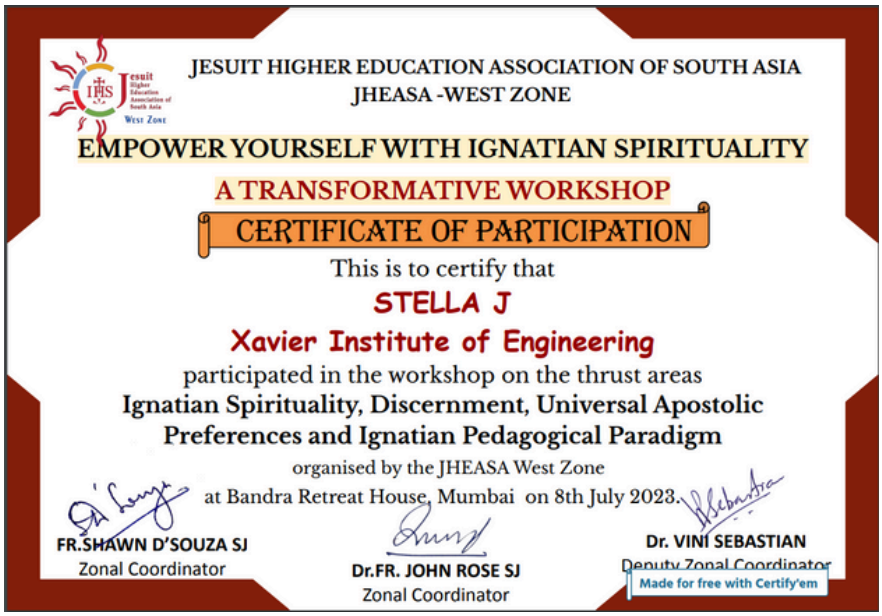
| Co-Ordinator | Co-Ordinator | H. O. D | Principal |

Prof. Stella J, Assistant Professor of IT Department attended a Conference organized by the JHEASA West Zone committee at Xavier Institute of Communication on 20th January, 2024



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This is to certify that

STELLA J

Xavier Institute of Engineering

participated in the workshop on the thrust areas

Ignatian Spirituality, Discernment, Universal Apostolic Preferences and Ignatian Pedagogical Paradigm

organised by the JHEASA West Zone

at Bandra Retreat House, Mumbai on 8th July 2023.

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Dr.FR. JOHN ROSE SJ
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Dr. VINI SEBASTIAN
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Prof. Jyotsna More, Assistant Professor of IT Department attended a Conference organized by the JHEASA West Zone committee at Xavier Institute of Communication on 20th January, 2024


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ENVISIONING NEP 2020
CERTIFICATE OF PARTICIPATION
This is to certify that
JYOTSNA MORE
XAVIER INSTITUTE OF ENGINEERI
participated in the Conference
organised by the JHEASA West Zone committee
at Xavier Institute of Communication in the premises of St.Xavier's College (Empowered Autonomous), Mumbai on 20th January, 2024
FR.SHAWN D'SOUZA SJ
Zonal Coordinator
Dr. FR. JOHN ROSE SJ
Zonal Coordinator
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