INSTITUTE OF ENGINEERING & TECHNOLOGY
(UGC Autonomous)
(Accredited by NAAC, Approved by AICTE & Permanently Affiliated to JNTUH)

Department of CSE

VOLUME X ISSUE II JUNE 2023

SPECIAL POINTS OF INTEREST:

- Technology Trends in 2023
- Department Events
- Technical Interview questions
- Student Articles

INSIDE THIS ISSUE:

About JBIET

Sri. J.V.Krishna Rao HRA (USA) -Secretary J.B. Educational Society

As one of the top ten most preferred institutions in Telangana, JBIET continues to strive to impart technical (engineering) and professional education of very high standards.

The aim of JBIET is to mould young learners into globally competitive professionals who are professionally deft, intellectually adept and socially responsible.

The expert faculty at JBIET inculcate the best values and principles, ascribing to a modern curriculum; while the students imbibe pragmatic perception and a pro-active nature, which spurs them towards exploration and advanced inquiry, resulting in valuable insights.

The Placement record of JBIET over the years is proof of our right efforts in enabling the best in class engineering, technical and professional education to aspirants.

The College offers various UG & PG Courses.

JBIET'S VISION & MISSION

Vision

To be a center of excellence in engineering and management education, research and application of knowledge to benefit society with blend of ethical values and global perception.

Mission

- To provide world class engineering education, encourage research and development.
- To evolve innovative applications of technology and develop entrepreneurship.
- To mould the students into socially responsible and capable leaders.

About Department

The Department of Computer Science & Engineering was started in the year 2015. It offers Undergraduate Programmed, B. Tech Computer Science & Engineering, which prepares students for the recent and forthcoming demands of industry and the research world.

The Department offers a Master's Programme namely, M. Tech in Computer Science & Engineering. This programme prepares students to become leaders in knowledge driven professions.

The immensely dedicated and highly professional faculty members in the Department are active in the Research Areas of Artificial Intelligence, Machine Learning, Data Science, Network Security, Wireless Networks, Block Chain Technologies, Big Data, Data Mining, Data Analytics, Cloud Computing etc.

Department has well equipped and state-of-the-art Laboratories to train students in various technologies. The Department also makes use of the Innovation Laboratories to train its UG and PG students in the respective technology areas and research.

The Department has many Adjunct Professors/Professor of Practice who typically have positions at Industry or other Premier institutions to bring in the industry expertise and research rigor in our programmes provide specialized supervision of student projects.

The students of CSE Department are placed in various top MNCs like IBM, Accenture, Cap Gemini, Cognizant, Wipro, Infosys, Mind tree, etc. with an emolument in the range of 2.86 Lakhs to 9.75 Lakhs per annum.

About Department

Vision

To meet the emerging trends in computer Scienceand Engineering, strive forself-reliance enabled through high end research by adapting a futuristicapproach.

Mission

M1: To impart qualitative education, prepare students refurbish their latent talents and aspire for a pragmatic career in Computer Science and Engineering.

M2: To provide an ambiance to develop strategic areas of advance study with perception to foster industry centric education in Computer Science and Engineering.

M3: To inculcate self-learning among students to make them self-reliant and socially responsible.

Program Educational Objectives (PEOs)

Program outcomes are narrower statements that describe what students are expected to know and be able to do upon the graduation. They are formed in line with the graduate attributes of NAAC. These relate to the Skills, knowledge, attitudes, values and behavior outcomes that students acquire through the program.

PEO1	To prepare graduates to apply the knowledge and skills acquired in Mathematics, Basic Science and Engineering to succeed in their career, pursue research and or obtain higher / advanced degree.
PEO2	To prepare graduates to learn emerging technologies, work in multidisciplinary fields, apply computer engineering solutions within a global, societal, environmental context, acquire leadership qualities and enable them to become successful entrepreneurs.
PEO3	To prepare graduates communicate effectively, exhibit professionalism with integrity, morals, ethical conduct and engage in lifelong learning.

Program Specific Outcomes (PSOs)

PSO 1	Ability to design and develop computing system using mathematical knowledge and expertise other disciplines.
PSO 2	Ability to test and analyse quality of various systems to integrate them in larger computer systems.

About Department

Program Outcomes (POs)

PO1	**Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
PO2	**Problem Analysis:** Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
PO3	**Design / Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
PO4	**Conduct investigations of complex problems**: using research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions.
PO5	**Modern Tool Usage**: Create, select, and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO6	**The Engineer and Society**: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues, and the consequent responsibilities relevant to professional engineering practice.
PO7	**Environment and Sustainability**: Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate knowledge of and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
PO9	**Individual and Teamwork**: Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project Management and Finance**: Demonstrate knowledge and understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long Learning:** Recognize the need for and have the preparation and ability to engage in independent and life- long learning in the broadest context of technological change. Any signatory needs to provide an overview of its learning outcomes and confirm that compliance of programs.

Message from HOD

Dr.G.Sreenivasulu, Ph.D
HOD,Department of CSE

I feel privileged to head the Department of Computer Science and Engineering. The department has consistently maintained an exemplary academic record. The greatest asset of the departmentis its highly motivated and learned faculty.

The objective of the department is to prepare students for successful careers in industry, research and academics to meet the needs of growing technology.

"We are what our thoughts have made us. So take care about what you think. Always be a part of the solution, do not be the part of problem. Always try to update your knowledge else, you will be outdated. If you want success do all the things you are supposed to do, then you need not search for shortcuts".

"People worry that computers will get too smart and take over the world, but the real problem is that they're too stupid and they've already taken over the world."

Technology Trends in 2023

Sustainable Drones

The implementation of drones in the fields of sustainability and scientific research is already a reality that opens the door to a future full of possibilities.

Military technology for civil society... and sustainability. The implementation of drones in the fields of scientific research, renewable energies, geology or agriculture is already a reality that opens the door to a future full of possibilities.The development of UAVs (unmanned aerial vehicle) or as they are popularly known, drones, is becoming a great ally of sustainability.

Sustainable benefits of drones

There are several benefits that drones have brought to the field of sustainability. First, UAVs with video camera are a very useful tool when flying over large tracts of land to obtain images quickly: areas of agricultural crops, forest areas, fire control... This way, we achieve the reduction of pollutant emissions derived from a ground or air control and can go faster to a critical point before the incident escalates. These unmanned devices are also being used to study air quality, the pollen count or characteristics of the atmosphere.

Mrs. Shaik Asha, M.Tech

Assistant Professor,CSE Dept.

Faculty Accomplishments

Research Paper Publications

- Dr.Niraj Upadhayaya, Published, Paper Entitled **"Philosophy And Ethical Dimensions Of Generative Deep Learning",**Held At System Design And Information Processing(Sdip) Vol:11, issue-3,140-144 ,ISSN:2319-9288 in March 2023.
- Dr.Niraj Upadhayaya, Published, Paper Entitled **"A Detailed Investigation On Potential Impact Of Quantum Computing On Improving Artificial Intelligence"**,held At IEEE On 14/3/2023.

- A.Ramesh Babu, presented a e-paper entitled **"Machine Learning Defence:Post Covid Prediction Using Machine Learning"** held at International Journal of System Design & Information Processing (SDIP),Volume 11 (2023) - Issue 3, ISSN Online: 2321- 0591, in April 2023.
- Our CSE faculty, Dr.P.Sreenivasa Rao, presented a paper entitled **"Time Series Earthquake Prediction Model"** held at International Journal of Scientific Research in Science Engineering & Technology, indexed in UGC Journal, Volume 10/ Issue 2, ISSN :Online: 2394-4099 in April 2023.
- Our CSE faculty, Dr.G.Sreenivasulu, presented a paper entitled **"Stock Market Prediction Using Transformers"** held at International Journal of Scientific Research in Science Engineering & Technology, indexed in UGC Journal, Volume 10/ Issue 2, Page No. 502-505, ISSN :Online: 2394-4099 in April 2023.
- Our CSE faculty, Dr.G.Sreenivasulu, presented a paper entitled **"Deep Learning Based Text To Image Generation"** held at International Journal of Scientific Research in Science Engineering & Technology, indexed in UGC Journal, Volume 10/ Issue 2, Page No. 623-628, ISSN :Online: 2394-4099 in April 2023.
- Our CSE faculty, Mr.D.Himagiri, presented a paper entitled **"Depression Detection Using Deep Learning"** held at International Journal of Scientific Research in Science Engineering & Technology, indexed in UGC Journal, Volume 10/ Issue 2, Page No. 542-546, ISSN :Online: 2394-4099 in April 2023.
- Our CSE Faculty Mr.A.Ramesh Babu ,published e-paper entitled "**A Blockchain- Based Approach For Drug Traceability In Healthcare Supply Chain "**held at Journal of Engineering Sciences, Volume 14 Issue 4 ISSN Online: 03777-9254, in April 2023.

Faculty Accomplishments

(Conference / Patent / Paper / Book Publication Etc.,)

Publications

- Dr.P.Sreenivasa Rao, presented a paper entitled **"E-Commerce Website Using Mern Stack"** held at International Journal of Scientific Research in Science Engineering & Technology, indexed in UGC Journal, Volume 10/ Issue 2, ISSN :Online: 2394-4099 in April 2023.
- Dr.G.Sreenivasulu, presented a paper entitled **"Electricity Consumption Prediction Using Machine Learning"** held at International Journal of Scientific Research in Science Engineering & Technology, indexed in UGC Journal, Volume 10/ Issue 2, ISSN :Online: 2394-4099 in April 2023.
- Mr.A.Ramesh Babu , presented a paper entitled **"A Blockchain- Based Approach For Drug Traceability In Healthcare Supply Chain"** held at Journal of Engineering Sciences, Volume 04 Issue 04, ISSN Online: 03777-9254 in April 2023.
- Our CSE faculty, Mr.D.Himagiri, presented a paper entitled **"Machine Learning Defence: Stress Detection In Employees using Deep Learning"**,held at International Journal of Scientific Research in Science Engineering & Technology, indexed in UGC Journal, Volume 11/ Issue 03, ISSN :Online: 2394-4099 in April 2023.

Conferences

- Mrs.S.Gayathri Devi has attended the Conference on the topic **"Appointment Managing System Using Full Stack Development"** held at International Journal of Scientific Research in Science Engineering & Technology in April 2023.
- Our CSE Faculty Mr.A.Ramesh Babu has attended the Conf**erence on the topic "**A Blockchain Based Approach For Drug Traceability In Healthcare Supply Chain " held at Journal of Engineering Sciences in April 2023.
- Mr.G.Sreenivasulu has attended the Conference on the topic **"Jb Outcome Based Educataion Software"** held at International Journal of System Design and Information Processing (SDIP) in April 2023.
- Our CSE Faculty Mrs.S.Pavani has attended the Conference on the topic **"Drowsiness DetectionSystem Using Machine Learning"** held at International Journal of Scientific Research in Science Engineering & Technology in April 2023.

Faculty Accomplishments

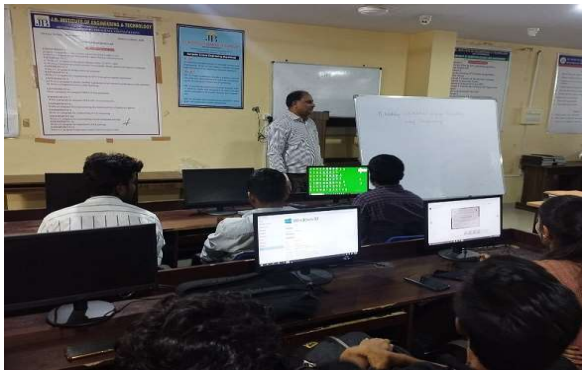
One Week / 3 (or) 2 Days FDP:

- Dr. Niraj Upadhayaya, Prof. CSE and Dean R&D participated in 5 days FDP on **"High Performance Computing"** at KL University,Vijayawada From 20-02-23 to 24-02-23**.**
- Dr.Rama Bulusu ,participated in a 5-days FDP on **"Empirical Data Science and Its Implications"** by Srinivasa Ramanujan Institute of technology, from 03-1-2023 to 07-1-2023.
- Our CSE Faculty Mr. Himagiri Danapana participated in 12 Week course NPTEL Online Certification on **"Programming in Java"**, MoE, Govt. of India, January – April ,2023,IIT Kharagpur and SWAYAM.
- Our CSE Faculty Mrs.Saudampalli Pavani Participated in 5 days FDP on **"Empirical Data Science and Its Implications"** organized by Srinivasa Ramanujan Institute Of technology, from 03-1-2023 to 07-1-2023.
- Our CSE Faculty Mrs.Ganna Swapna Participated in 5 days FDP on **"Empirical Data Science and Its Implications" o**rganized by Srinivasa Ramanujan Institute Of Technology, from 03-1-2023 to 7-1-2023.
- Mrs.Sri Laxmi Aswani Participated in 5 days FDP on **"Document Preparation using Latex"** from VJIT, From 21-03-2023 to 25-03-2023.
- Mr.P.Dharma Teja Participated in 5 days FDP on **"Document Preparation using Latex"** from VJIT,from 21-03-2023 to 25-03-2023.
- Our CSE Faculty Mrs.Saudampalli Pavani Participated in 5 days FDP on **"Use of ICT tools in teaching learning process"**, MBG ,M.P, from 16-01-2023 to 20-01-2023.
- Mrs.Saudampalli Pavani Participated in 5 days FDP on **."Introduction to Python Programming & its Applications",** by Visveswaraya Technological University, from 13-3-2023 to 17-3- 2023.
- Mr.Chinmaya Pramanik Participated in 5 days FDP on **"Document Preparation using Latex"** from VJIT, From 21-03-2023 to 25-03-2023.
- Mr.G.Rama Krishna Participated in 5 days FDP on **"Document Preparation using Latex"** from VJIT,From 21-03-2023 to 25-03-2023.
- Mrs.Shaik Asha Participated in 5 days FDP on **"Document Preparation using Latex"** from VJIT,From 21-03-2023 to 25-03-2023.

Seminars/Workshops/FDPS

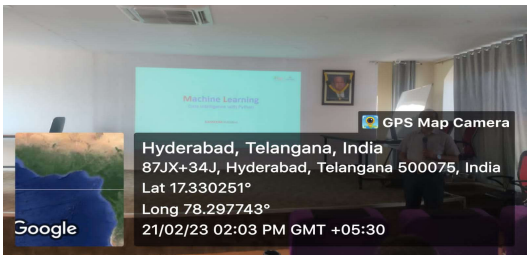
1.WORKSHOP

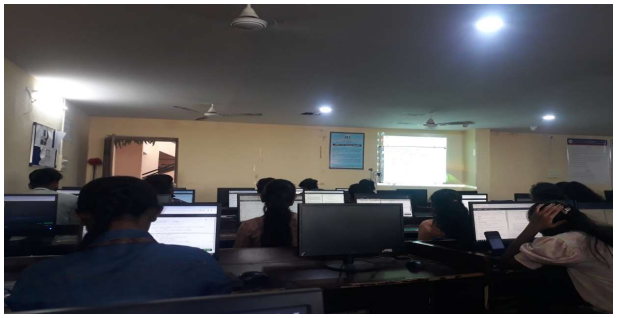
The Department of CSE, JBIET Organized a Two-Days Workshop Programme on "Natural Language Processing Using Deep Learning" from 07/04/2023 to 08/04/ 2023 by Professor Dr. Venkata Ranga Rao Konkimalla.



2.WORKSHOP

The Department of CSE, JBIET conducted a One Day workshop on the topic "Machine Learning" through ACM Chapter & CODE HUB Club on 21/02/2023.





3.WORKSHOP

The Department of CSE, JBIET conducted a One Day workshop on "DigitalMarketing"

through ACM Chapter & CODEHUB Club on 27/02/2023.

Seminars/Workshops/FDPS

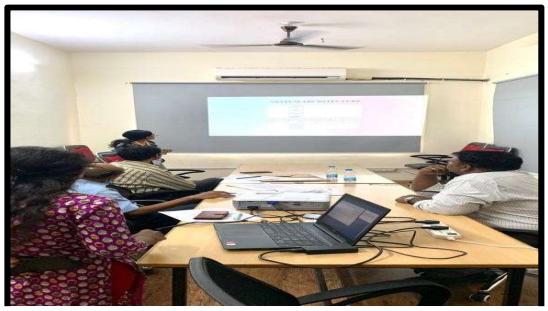
4.EXPERT LECTURE

The Department of CSE, JBIET conducted a One Day Expert Lecture on the topic "Growing Importance of AI in Pharma & Medical Fields" on 04/03/2023.

5.INTERNATIONAL CONFERENCE

The Department of CSE along with the Collaboration of Other Departments of JBIET JBhaskar Rao Memorial 1st International Conference on Advanced Applications of Technology and Management (AATM-2023) from 10/03/2023 to 11/03/2023.

Seminars/Workshops/FDPS



Faculty Accomplishments

- Dr.Niraj upadhayaya, Published, Paper Entitled **"Genetic Algorithm", h**eld At OLIP ISSN:978-93-95978-70-5, in April 2023.

- Dr.G. Sreenivasulu , Published, E-Paper Entitled **"Time Series Earthquake Prediction Model",** indexed in UGC Journal, held at International Journal of Scientific Research in Science ,Engineering & Technology, Volume 10/ Issue 2, **ISSN:** 2394-4099 in April 2023.

- Mr.A.Ramesh Babu, Published, E-Paper Entitled **"Machine Learning Defence:Post Covid Prediction Using Machine Learning"**, held at International Conference of System Design & Information Processing(SDIP), Volume 11(2023) -Issue3, Page Nos 11 6-120, ISSN Online: 2321- 0591 in April 2023.

- Mrs.S.Pavani, Published, E-Paper Entitled **"Accessibility System To Control Laptop Without Mouse",** indexed in UGC Journal held at International Journal of Scientific Research in Science ,Engineering & Technology, Volume 10/Issue 2, Page No. 340-345, ISSN Online: 2394-4099 in April 2023.

- Our CSE Faculty, Dr.P.Srinivasa Rao,Published, E-Paper Entitled **"Hall Ticket Generation And Results Displaying System",** held at Journal of Engineering Sciences, Volume 04/ Issue 04, ISSN Online: 03777-9254 in April 2023.

- Mr.D.Himagiri,Published,E-Paper Entitled **"Depression Detection Using Deep Learning"**, indexed in UGC Journal held at International Journal of Scientific Research in Science , Engineering & Technology, Volume 10/ Issue 2, Page No. 540-546, ISSN Online: 2394-4099 in April 2023.

- Mr.N. Thirumala Rao, Published, E-Paper Entitled "**The Chatbot Based online Shopping Web Application"** indexed in UGC Journal held at International Journal of Scientific Research in Science ,Engineering & Technology, Volume 10/ Issue 2, Page No. 547-552, ISSN Online: 2394-4099 in April 2023.

- Our CSE Faculty, Mrs.S.Gayathri Devi, Published, E-Paper Entitled **"Vigorous Malware Detection In Iot Devices Using Machine Learning ",** held At Journal Of Engineering Sciences, Volume 14/ Issue 04, ISSN Online: 03777-9254 in April 2023.

- Mr.G.Gopala Krishna,Published, E-Paper Entitled **"Efficient Revocable Multi Authority Based Attribute Encryption"** indexed in UGC Journal held at International Journal of Scientific Research in Science ,Engineering & Technology, Volume 10/ Issue 2, ISSN Online: 2394-4099 in April 2023.

"Books allow you to fully explore a topic and immerse yourself in a deeper way than most media today"

Student Triumphs

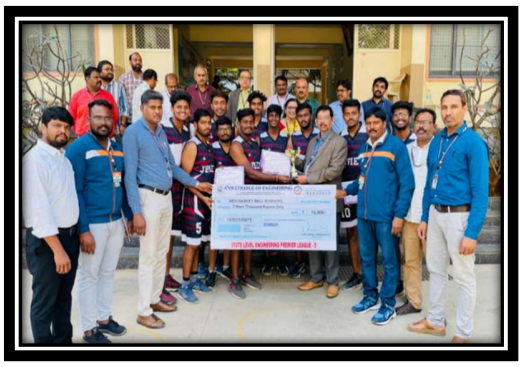
SEMINARS/CONFERENCES/WORKSHOPS

- Our CSE Students ,Priyanka, Ch.Keerthana, P.Niharika, V.Prathyusha Published, E-Paper Entitled **"Accessibility System To Control Laptop Without Mouse",** Indexed In UGC Journal Held at International Journal Of Scientific Research In Science, Engineering & Technology, Volume 10/ Issue 2, Page No. 340-345, ISSN Online: 2394-4099 In April 2023.
- Our CSE Students, Chamakura,Abhiram,Karthik, K. Samyuktha, M.Sai Sri, presented a e-paper entitled **"Machine Learning Defence:Post Covid Prediction Using Machine Learning"** held at International Journal of System design & Information Processing(SDIP), Volume 11 (2023) Issue 3, Page_11 6-120, ISSN Online: 2321- 0591, in April 2023.
- Our CSE Students, Aditi M.Vaishnavi ,T. Kranthi Priya,T. Aruna Presented A Paper Entitled **"Time Series Earthquake Prediction Model"** Held At International Journal Of Scientific Research In Science Engineering & Technology, Indexed In Ugc Journal, Volume 10/ Issue 2, ISSN :Online: 2394-4099 In April 2023.
- Our CSE Students, R. Sampada, J. Shivani, V. Lasya, B. Srujana, Presented A Paper Entitled **"Stock Market Prediction Using Transformers"** Held At International Journal Of Scientific Research In Science Engineering & Technology, Indexed In Ugc Journal, Volume 10/ Issue 2, Page No. 502-505, ISSN :Online: 2394-4099 In April 2023.
- Our CSE Students, G. Ajay, Ch.Sai Teja ,P.Baswaraj ,V.Vasanth, Presented A Paper Entitled **"Deep Learning Based Text To Image Generation"** Held At International Journal Of Scientific Research In Science Engineering & Technology, Indexed In Ugc Journal, Volume 10/ Issue 2, Page No. 623-628, ISSN :Online: 2394-4099 in April 2023.
- Our CSE Students, Adithya Chowdary , B. Jay Chandra , H.Shiva Teja , P. Madhukar, Presented A Paper Entitled **"Depression Detection Using Deep Learning"** Held At International Journal Of Scientific Research In Science Engineering & Technology, Indexed In UGC Journal, Volume 10 Issue 2, Page No. 542-546, ISSN:Online: 2394-4099 In April 2023.
- Our CSE Students ,J.Ajay, A. Iswarya, N. Aman Rao, S Venkata Ramana, Published E-Paper Entitled **" A Student Chat Bot For College Administration Using Artificial Intelligence"** held At Journal Of Engineering Sciences, Volume 14 Issue 4 ,ISSN Online: 03777-9254, In April 2023.
- Our CSE Students ,D.Dinakar, N. Suresh, G. Ravali, P.Rohith Reddy, Published, E-Paper Entitled **"Hall Ticket Generation And Results Displaying System",** Held At Journal Of Engineering Sciences, Volume 04/ Issue 04, ISSN Online: 03777-9254 In April 2023.

Student Triumphs

SPORTS

1.STATE LEVEL ENGINEERING PREMIER LEAGUE-(EPL-5)-2023, BASKETBALL(Men) at CVR Vastunagar, Mnagalpalli, R R Dist, Telangana held on 1st Feb 4th Feb 2023,CSE Dept. Students Participated among 40 teams in this tournament & JBIET won in RUNNERS.



2.A NATIONAL LEVEL SPORTS FEST- PHOENIX-2023. TABLE TENNIS(Singles & Doubles Men) team at VJIT Aziznagar, Moinabad, Hyderabad. Held on 2nd & 3rd March 2023 CSE Dept. Students participated among 40 teams in this tournament & JBIET won in WINNER.

TABLE TENNIS(Singles) WINNER

TABLE TENNIS(Doubles)WINNER

3.STATE LEVEL INTER ENGINEERING COLLEGIATE TOURNAMENT-2023, BASKETBALL(Women), THROWBALL(Women) teams at K G REDDY COLLEGE, Chilkur, Moinabad, R R Dist,Telangana ,held on 17th & 18th APRIL 2023,CSE Dept. Students participated among 16 teams in this tournament & JBIET won in RUNNERS.

Student Triumphs

BASKETBALL-RUNNERS

THROWBALL-RUNNERS

4.STATE LEVEL INTER ENGINEERING COLLEGIATE TOURNAMENT-2023, VOLLEYBALL(Men)team at HITHAM COLLEGE, Maisammaguda, Hyderabad, Telangana held on 26th & 27th APRIL 2023,CSE Dept. Students participated among 14 teams in this tournament & JBIET won in RUNNERS.

5.STATE LEVEL SPORTS FEST-AARAMBH-2023, BASKETBALL(Women), BASKETBALL(Men) teams at J.B. INSTITUTE OF ENGINEERING & TECHNOLOGY, YENKEPALLY, MOINABAD, R R DIST, Telangana. Held on 9th & 10th JUNE 2023. Womens Team WINNERS & Mens Team RUNNERS.

BASKETBALL(WOMEN)-WINNERS

BASKETBALL(MEN)-RUNNERS

Intelligent Applications

Introduction

With the advent of the Machine learning and AI, the apps received a new transformation in terms of intelligence. Next generation apps have brought intelligence to software, enabling users to interact with everyday devices in new ways. Nowadays apps could take the input from the user and make changes in the app by learning from the user and improve the user experience accordingly. Apps technology is developed to the extent that the data collection and analysis is done on the real-time bases and product offering is also done real time based on the data analyzed. So, let's consider what intelligent apps are and in what areas they are applied.

The definition of intelligent apps

Intelligent apps are applications that use real-time and historical data from user interactions and other sources to make suggestions and predictions, delivering adaptive and personalized user experiences. To make user experiences high-end these apps bring together the power of prescriptive and predictive analytics, operational data, consumer data and cutting-edge technologies, with latest user-centric design and application development tools.

Intelligent apps use the power of machine learning and AI to engage with users in previously unimaginable ways. These apps have embedded AI and analytic technologies, creating the ability to act intelligently on the feedback the app receives from its environment.

The typical features

Virtual assistants, chat bots and recommendation engines on e-commerce sites are just some examples of intelligent applications. Though it's difficult to formulate a overall of their definition, they have a number of common features:

1. Intelligent apps are adaptive and could easily upgrade their knowledge as per their surroundings. They adapt quickly to new demands, offer more insight than before, owing to its sustained learning path, an ever evolving one.

2. Intelligent Apps work upon huge amounts of data, read and store human a vast array of human interactions, process it combined with sensory inputs and powered by IoT and come up with truly intelligent valuable insights or results.

3. Intelligent apps deliver predictive behavior based on user activity. Deep analysis enables not only personalization but also continuous changes in the app behavior too to serve the changing demands of differential usage pattern.

Areas of use

Education

Intelligent mobile apps are bringing learners closer to the sources of knowledge. These apps are empowering students to make notes in the form of speech and images, along with text format. They are also providing assistance in determining which formula/principle to consider for solving a problem.

Healthcare

AI-based intelligent apps are transforming healthcare. These applications are bringing better opportunities for both patients and medical practitioners and simplifying their interactions. These applications are easing the path to find the best nearest doctor, book a consultation, keep reminder of medication, getting a basic knowledge of each medication, and more.

Fintech

Another industry enjoying the finest results from the usage of intelligent apps is Fintech. The Fintech industry is using AI-based intelligent apps for analyzing the past and present expenses of users and providing them with better budget-managing tips.

Energy sector

Energy sector is another area where intelligent application is making massive inroads. Whether we talk about storage capacities, mapping of energy usage, or autonomous grids receiving mammoth sized data from sources as different as wind, solar, tidal, or in failure mitigation and management saving loss of life and money, intelligent applications based on AI are showing the way forward.

Media and entertainment

The digital marketing strategy has gone for overhaul with advent of intelligent applications. Content creation, duration, SEO are all integrating resilient and robust AI based technologies with intelligent apps as the keystone.

Wrapping up

Nowadays, AI is used to build intelligent apps that help organizations be more efficient and enrich people's lives. Intelligent apps are touching all areas of our lives – Media, Technology, Healthcare, Finance, Lifestyle, etc., by implementing tasks with the highest accuracy.

Dr.K.Rama Krishna,M.Tech,Ph.D

Professor, CSE Dept.

Internet of Things (IoT) and the Smart City

Introduction

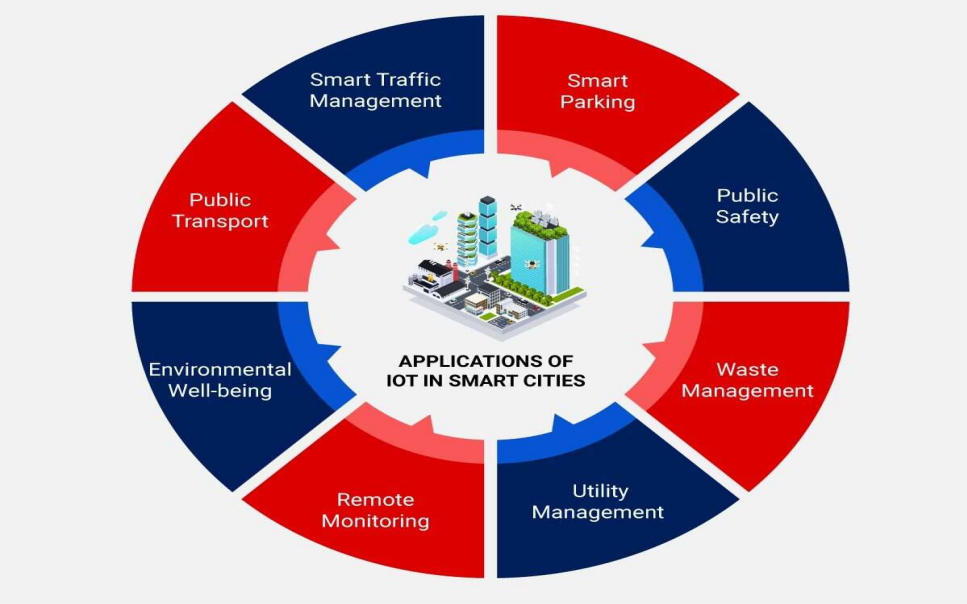
The Internet of Things (IoT) refers to the network of physical objects, such as devices, vehicles, and buildings, embedded with sensors, software, and connectivity, which enable them to collect and exchange data. These connected devices can communicate with other devices and systems, allowing them to function and share data seamlessly.

Together, IoT and the smart city are being used to efficiently address the escalating demands for resources of so many residents living, working, driving, and interacting with each other. For example, IoT and smart city initiatives are being applied to the improvement of traffic management, energy consumption, public safety, healthcare, and more.

IoT in Smart Cities

IoT forms the technical backbone of every smart city in the world, equipping them with the intelligence, interconnection, and instruments needed to improve urban services, optimize resources, and reduce costs. By connecting various devices, systems, and people, IoT can provide real-time data and insights on city operations and infrastructure.

However, there are some distinct challenges in fully realizing the vision of a smart city – with **security** being the biggest concern at present. To this end, the interconnectedness of IoT devices creates new vulnerabilities for cyberattacks, data breaches, and unauthorized access.



Benefits of IoT in Smart Cities

IoT-based smart cities leverage the combined use of apps, connected systems, buildings, devices, and more to create efficient living & working environments. Here are just a few of its many benefits:

- **Improved infrastructure management**: IoT technology can be used to monitor and manage the city's infrastructure, including bridges, roads, and buildings. This can help identify maintenance needs, reduce downtime, and improve overall safety.
- **Enhanced public safety**: IoT-enabled sensors and cameras can help improve public safety by detecting potential security threats, tracking criminal activity, and monitoring emergency response times.
- **Efficient transportation**: IoT helps optimize public transportation routes, reduce congestion, and improve traffic flow. Connected vehicles can also communicate with each other and with traffic systems, enabling safer and more efficient travel.
- **Energy efficiency**: IoT technology enables monitoring and managing energy use in buildings and public spaces, reducing energy waste and saving costs.
- **Improved waste management**: IoT sensors can help optimize waste collection routes, reducing the environmental impact of garbage collection and lowering costs.
- **Enhance citizen engagement**: IoT-enabled platforms can enable citizens to participate in city planning, and provide feedback on urban services, and report issues in real time.
- **Health and wellness**: IoT can be used to monitor air quality, detect environmental hazards, and track health trends, providing valuable data for public health officials to develop policies that improve citizen's health.

Overall, IoT in smart cities can help improve the quality of life for citizens, drive innovation and economic growth, and create a more sustainable and resilient future.

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