BAPUJI EDUCATIONAL ASSOCIATION (REGD.)

Bapuji Institute of Engineering and Technology.Dvg

Department of Information Science and Engineering

Info Voice 2025

Bapuji Educational Association (Regd.)
Bapuji Institute of Engineering and Technology, Davangere-04
(Affiliated to VTU Belagavi, Approved by AICTE, New Delhi)
Accredited by the NAAC with A Grade

INFO VOICE

Department of Information Science and Engineering

Volume-8 **August 2024 - July 2025**

"Education is not solely about earning a great living. It means living a great life."

- Brad Henry

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Vision of the Institute

"To be **center of excellence** recognized **nationally** and **internationally**, in distinctive areas of **engineering education** and **research**, based on a culture of **innovation** and **invention**."

Mission of the Institute

"BIET contributes to the **growth** and **development** of its students by imparting a board based **engineering education** and **empowering** them to be successful in their chosen field by inculcating in them **positive approach**, **leadership qualities** and **ethical values**."

Vision of the Department

"To be the **center of excellence** by adopting technological **innovation** in **academics** and **research** to develop competent **manpower** for emerging needs of **society** and i**ndustries."**

Mission of the Department

M1: To provide **quality education** to meet the challenges of technological changes to succeed in their **professional career** and **higher education.**

M2: To inculcate the culture of **research, innovation** and **entrepreneur skills** among the students**.**

M3: To groom our students with the quality of **team spirit, leadership skills** and **ethical values**, to share and apply their knowledge for the **benefit of the society.**

Program Educational Objectives (PEOs):

PEO1- The graduates of the program will have **excellence** through **principles** and practices of **Information Technology** combined with **Fundamentals of Engineering.**

PEO2 - The graduates of program will be prepared in **diverse areas** of **Information Science** for their **successful careers**, **entrepreneurship** and **higher studies**.

PEO3 - The graduates of program will **work effectively** as an **individual** and in a **team,** exhibiting **leadership qualities**, **communication skills** to meet the **goals** of the **organization.**

PEO4 - The graduates of program will grove their **profession** with **ethics, Management principles** to carry **societal responsibilities.**

Program Specific Outcomes (PSOs):

PSO1: Problem Solving Skills - Ability to apply **standard principles** and **practices** of Information Technology to propose **feasible ideas** and **solutions** to computational tasks using **appropriate tools** and **Techniques.**

PSO2: Knowledge of Information Technology – Analyze, Design, Develop and **Test computer-based** software in the areas related to **Algorithms, Networks, Cloud Computing, Web, Data Science and IoT.**

PSO3: Profession and Research Ability – Inculcate the knowledge to **excel** in **IT profession**, **Entrepreneurship** and **research** with **Ethical standards**.

The objectives of the newsletter:

- To Exhibit the achievements of the Students and Faculty members from the Department of Information Science and Engineering in Curricular, Co-curricular and Extra-curricular Activities.
- To publish the recent trends in the area of Information Science & Engineering and related areas.

About the Department:

The department was established in the year 2000 with an intake of 60 students and it was increased to 120 in the year 2007, 150 in the year 2021,180 in the year 2022 and 300 in the year 2024. The department is equipped with all necessary infrastructure and laboratory facilities. Keeping in view of the vision of the department, the department of Information Science is working to achieve excellence in various aspects such as: students' performance, effective teacher-student relationship, imparting quality education to students, motivating faculty and students towards research and imbibing best human qualities in students.

The department has a strong and active Forum INSYNC helping in all-round development of the students through various Technical Workshops on Recent Technologies like Big Data, Cloud Computing, Python, Android, IoT etc. Extensive placement trainings are conducted to improve employability of the students. The faculty of the department is actively involved in research activities in various technical domains.

The department has established Industry 4.0 Center of Excellence in collaboration with Rovelabs, Bengaluru to adapt itself to the rapid advancements in various specialized fields.

NEWSLETTER COMMITTEE

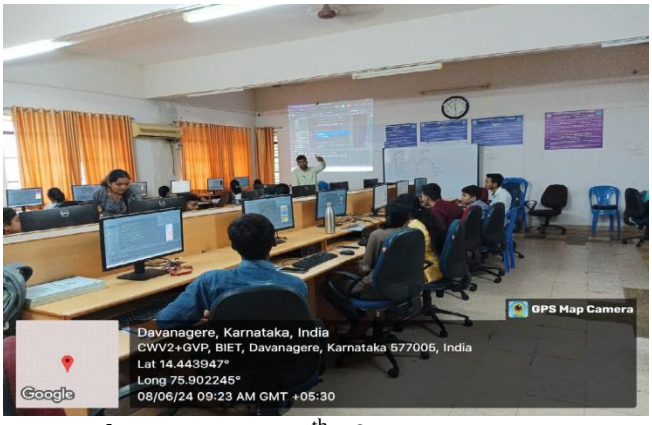
Message from HOD's Desk:

I am happy to note that the Department of Information Science and Engineering is releasing its Newsletter for Academic Year 2024-25 (Volume 8) and enumerating the various activities of our faculty and students. Working towards the overall development of the students, the department is committed to bring the best of the students through this newsletter. Education is more important in our life than learning or being literate. The Newsletter is a good way to learn about developments and activities of the department and to let others know. I congratulate all the people who have been associated with this publication.

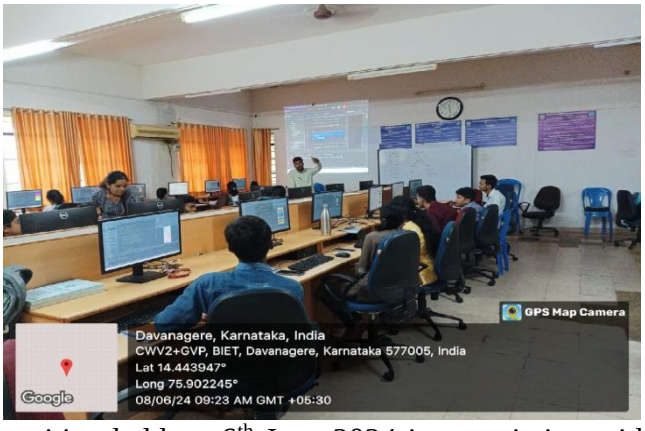
Dr. Poornima B.
Prof. & Head,
Dept. of IS&E

Activities Conducted in the Department

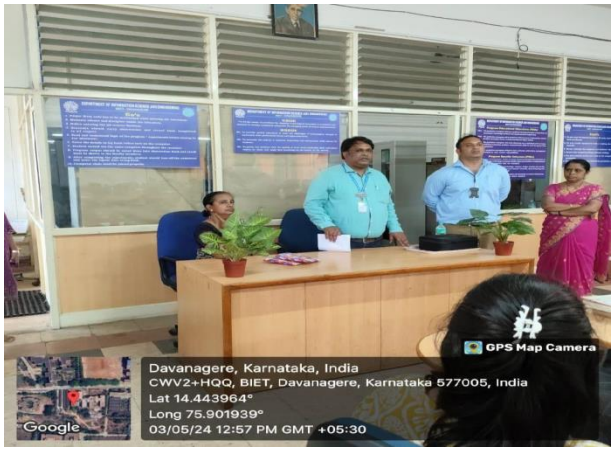
First Phase **Project Demo** was conducted for 6th sem students on May 21st 2025.

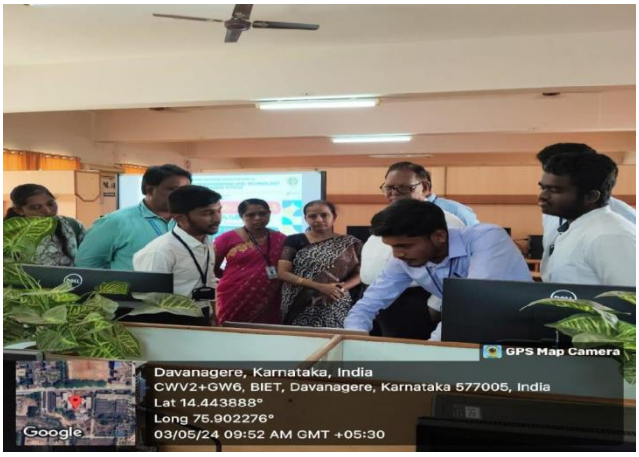


Final Phase **Project Demo** was conducted for 8th sem students on May 12th 2025.



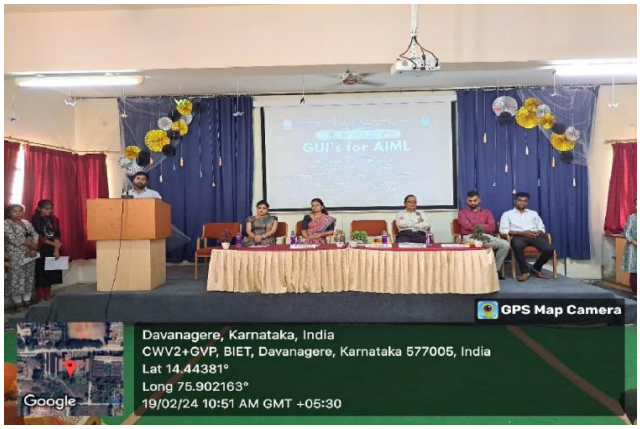
"HackTechFusion3.0" A technical coding competition held on 6th June 2024 in association with NAIN, IEEE, ISTE and IEI.





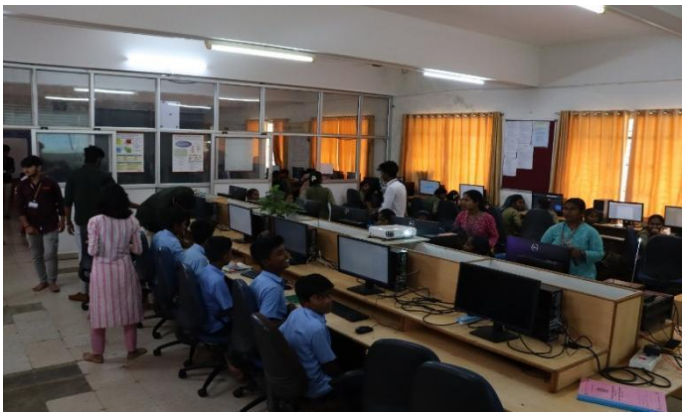
Workshop on **DBMS Application Development using MongoDB** for 4th sem students in Association with IEEE was conducted from May 5th to May 7th 2025.

Metaclub Awareness Program on VR was conducted on 11th April 2025 for Students.



One week FDP on **"Cloud Computing and Its Security"** was conducted for Faculties and students from Mar 17 to Mar 21 2025 in association with ISTE and IEEE.

Technical Talk on "**Advancement in AI and its Career Opportunities**" was conducted for 6th Semester Students on 1st Mar 2025 in association with INSYNC, IIC and IQAC.



Computer Awareness Program on KAUSHALYA Digital Literacy was conducted from 12th to 13th Dec 2024 for Government School Students in Association with SS Care Trust.

Exhibition on **"MINI PROJECTATHON – 2024"** was conducted for 5th semester students on 12th Dec 2024 in association with IEI, ISTE and IIC.

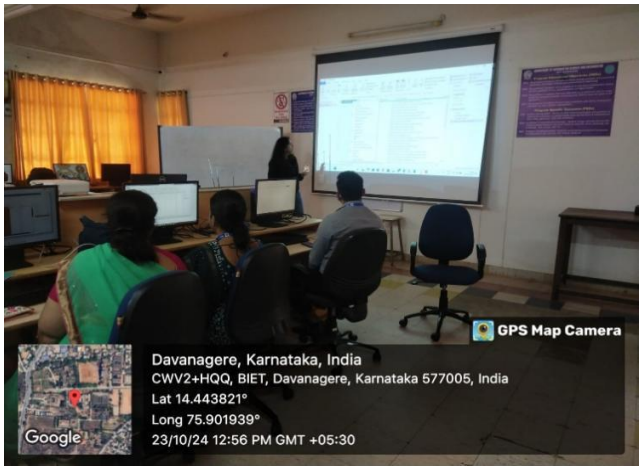
Competition on "**Power Bi: Turning Complexity into Clarity**" was conducted for 5th Semester Students on 9th Dec 2024 in association with INSYNC and IQAC.

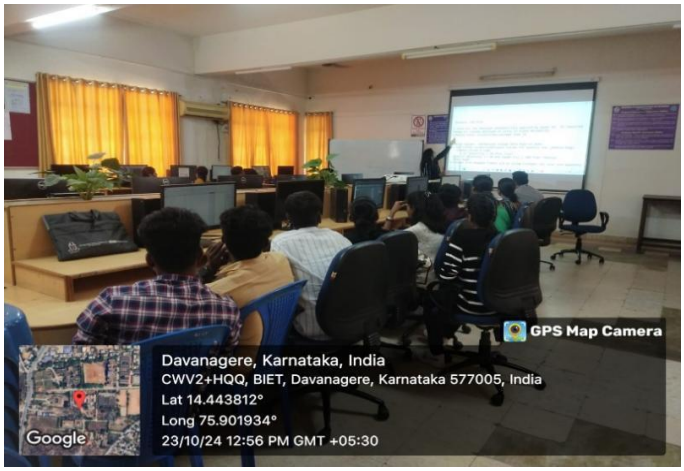
Tech Talk on "**Cyber Security**" was conducted for 5th Semester Students on 16th Nov 2024 in association with INSYNC and IQAC.

Tech Talk on "**Enterprise Resource Planning Software** "was conducted for 5th Semester Students on 23rd Nov 2024 in association with INSYNC Forum.

Parent Teachers Meeting was conducted on 11th Nov 2024 for 3rd semester students.

Conference on **"Innovations in Communications, Electrical and Computer Engineering (ICICEC)"** was conducted for Faculty & Students on 24th and 25th Oct 2024 in association with IEI, ISTE, IIC and IEEE.





One day FDP on **"DATA-DRIVEN RESEARCH"** Leveraging Power BI for Enhanced Analysis was conducted for Faculties & Students on 23rd Oct 2024 in association with IEI, ISTE, IIC and IEEE.

Faculty Publication for the year Aug 2024-July 2025

1) Dr Vinutha H P," **Deciphering Complex Meanings from Unstructured Data: A Hybrid Approach** "in YMER, https://ymerdigital.com/uploads/YMER2403D1.pdf.

2) Dr. Vinutha H P, "**Kidney Stone Detection Using CNN Classification and SVM Classifier: A Hybrid Approach**" in Journal of Research in Artificial Neural Network Systems (e-ISSN: 3107-4812). http://hbrppublication.com/OJS/index.php/JRANNS/article/view/7162.

3) Dr. Vinutha H P, "**Pancreatic Cancer Detection and Classification Using Machine Learning and Deep Learning**" in International Journal of Sciences and Innovation Engineering. https://www.ijsci.com/index.php/home/article/view/129.

4) Dr. Rekha C, "**Bio-Inspired ACO-based Traffic Aware QoS Routing in Software Defined Internet of Things**", in APPLIED ARTIFICIAL INTELLIGENCE, 2024, VOL. 38, NO. 1, e2371739 (26 pages) https://doi.org/10.1080/08839514.2024.2371739 (Taylor & Francis) **Q2**, Impact Factor: 5.3.

5) Dr N S Patil," **Deciphering Complex Meanings from Unstructured Data: A Hybrid Approach** "in YMER, https://ymerdigital.com/uploads/YMER2403D1.pdf.

6) Dr. Arun Kumar G Hiremath, "**Assertion of Soil Data Consistency by Detecting and Removing Spatial Outliers Using Iterative Techniques for Precision Agriculture**", in IEEE Access (VOLUME 12, 2024) (Q1/ Web of Science / Scopus), Impact Factor 3.9.

7) Prof. Rekha B.H, "**Analysis of Clustering Algorithm in Machine Learning for Healthcare Data** ", in International Journal of Scientific in Engineering and Management (IJSREM), Impact Factor: 8.448.

8) Prof. Rekha B.H, Presented paper "**Towards Deeper Sentiment Understanding: A Survey on Aspect Based Sentiment Analysis and Sarcasm Detection**" on 26/7/25 in International conference Harnessing AI, Quantum Computing, Sustainable Future (ICAQASF) organized by East Point College of Engineering Technology, Bangalore.

9) Prof. Puneeth S P, Published the paper titled "**Enhanced Multi-Layer Vision Transformer for Brain Stroke Detection Using Advanced Image Segmentation and Deep Learning Techniques**" in International Journal of Intelligent Engineering and systems (Q2) in 2025.

10) Prof. Hemashree H C," **Quantum Computing's Impact on Software Engineering**", in International Research Journal of Engineering and Technology (IRJET) Impact factor: 8.315.

11) Prof. Hemashree H C," **Predicting Dengue in India through Machine Learning: A Literature Review**", in International Research Journal of Engineering and Technology (IRJET), Impact factor: 8.315.

12) Prof. Santosh T," **AI in Healthcare and Medicine**", in International Journal of Scientific Research & Engineering Trends (IJSRET), Impact Factor: 8.21.

13) Prof. Santosh T, Published the paper titled "**Performance Evaluation of Deep Learning Methods for Cervical Spine Fracture Detection**" has been accepted for publication in the journal SN Computer Science (Q2, Springer).

14) Prof. Madhuri Martis, Published in IJIRSET entitled "**AI Driven Missing Person Detection**" on May 2025.

15) Prof. Madhuri Martis, "**A Survey on Machine Learning System for Intraductal Papillary Mucinous Neoplasms Detection**" which has been published in of International Journal of Science and Research archive (IJSRA) in 2025.https://ijsra.net/content/survey-machine-learning-system-intraductal-papillary-mucinous-neoplasms-detection

Faculty Participation in FDP/Workshops for the year [Aug-2024 to July 2025]

1. Dr. Rekha C, Participated in Two Days Workshop on "**Artificial Intelligence and its Applications for Signals and Communication Systems**" from 19th to 20th Nov 2024, organized by Department of Electronics and Communication Engineering, BIET, Davangere
2. Dr. Anitha G has successfully participated and completed AICTE Training and Learning (ATAL) Academy Faculty Development Program on "**AI and Security: Current Trends and Future Research"** at S J C INSTITUTE OF TECHNOLOGY from 20th to 25th Jan 2025.
3. Dr. Patil N S, Participated in **Artificial Intelligence**, organized by TCS, Thane, Mumbai on 01-07-2025.
4. Dr. ArunKumar G H, Participated in Wadhwani Faculty Development Program on "**Entrepreneurship**" organized by IIIT, Bangalore from 21st to 25th July 2025.
5. Prof. Rekha B H has successfully participated and completed AICTE Training and Learning (ATAL) Academy Faculty Development Program on "**AI and Security: Current Trends and Future Research"** at S J C INSTITUTE OF TECHNOLOGY from 20th to 25th Jan 2025.
6. Prof. Puneeth S. P Participated in Six Days FDP on **"Next-Gen Cybersecurity: Strategies for a Resilient Digital Future"** from 21st to 26th Oct 2024, organized by JIT, Davangere

7. Prof. Hemashree H C Participated in Six Days FDP on **"Advancing Frontiers in Supercomputing, AI, and Quantum Computing: Innovations, Applications, and Integration"** from 9th to 14th Dec 2024, Organized by GMIT, Davangere.
8. Prof. Santosh T**,** Participated in Six Days FDP on "**Building a culture of Cyber Security-Train your Employees to be safe online"**, from 11th to 16th Nov 2024, Organized by GMIT, Davangere.
9. Prof. Kamala R, Participated in Six Days FDP on "**Big Data Analytics**", organized by East Point College of Engineering &Technology from 1st to 7th July 2025.
10. Prof. Sushma C has successfully participated and completed AICTE Training and Learning (ATAL) Academy Faculty Development Program on "**AI and Security: Current Trends and Future Research"** at S J C INSTITUTE OF TECHNOLOGY from 20th to 25th Jan 2025.
11. Prof. Manjushri K R has successfully participated and completed AICTE Training and Learning (ATAL) Academy Faculty Development Program on "**AI and Security: Current Trends and Future Research"** at S J C INSTITUTE OF TECHNOLOGY from 20th to 25th Jan 2025.
12. Prof. Roopa D E has successfully participated and completed AICTE Training and Learning (ATAL) Academy Faculty Development Program on "**AI and Security: Current Trends and Future Research"** at S J C INSTITUTE OF TECHNOLOGY from 20th to 25th Jan 2025.
13. Prof. Vinutha D, attended the workshop on "**Trends/Scope in Electric Vehicle**", Organized by ICT Academy from 31st June to 4th July 2025.
14. Prof. Madhuri Martis has successfully participated and completed AICTE Training and Learning (ATAL) Academy Faculty Development Program on "**AI and Security: Current Trends and Future Research"** at S J C INSTITUTE OF TECHNOLOGY from 20th to 25th Jan 2025.
15. Prof. Chaitra K G has successfully participated and completed AICTE Training and Learning (ATAL) Academy Faculty Development Program on "**AI and Security: Current Trends and Future Research"** at S J C INSTITUTE OF TECHNOLOGY from 20th to 25th Jan 2025.
16. Prof. Chaitra K C has successfully participated and completed AICTE Training and Learning (ATAL) Academy Faculty Development Program on "**AI and Security: Current Trends and Future Research"** at S J C INSTITUTE OF TECHNOLOGY from 20th to 25th Jan 2025.

Students' Participation in Co-curricular and Extra-curricular Activities For the Year 2024-25

SL. No	USN	Students Name	Name of the Workshop/ Seminar/ Lecture/ Conference/ Competition/ Course/Fest	Organized By	Date	Participated/ Presented/ Published/ Completed	Prizes Won (if any)
1	4BD22IS175	Udaya A S	SOC Level 2 Learning Path	Try Hack Me	22nd May 2025	-	-
2	4BD21IS151 4BD21IS063 4BD22IS412 4BD21IS079	Vishnavi Desai Mehek N Simran Banu Pooja P S	Nirmana 5.0, In-House Project Exhibition	BIET, Davangere	17th May2025	An EEG-Based Braille Interviewing System for Blind Individuals and Cognitive Assessment using Machine Learning	Best Social Awareness Project of the Institute
3		Arun C R	Project Generative AI for SDLC	Rakuten India Enterprise Private Limited and BIET Davangere	3rd March 2025	Appreciation	-
4	4BD22IS057	Hafsa Anjum D	Power BI Competition	Dept. of ISE BIET, Davangere	9th Dec 2024	Participated & awarded	1st Prize
5	4BD22IS033	Chaitra K S	Power BI Competition	Dept. of ISE BIET, Davangere	9th Dec 2024	Participated & awarded	1st Prize
6	4BD22IS036	Chetanraj Jakanur	Power BI Competition	Dept. of ISE BIET, Davangere	9th Dec 2024	Participated & awarded	1st Prize
7	4BD22IS075	Keerthan M Rao	Power BI Competition	Dept. of ISE BIET, Davangere	9th Dec 2024	Participated & awarded	1st Prize
8	4BD22IS161	Sumanth P Bellad	Power BI Competition	Dept. of ISE BIET, Davangere	9th Dec 2024	Participated & awarded	2nd Prize
9	4BD22IS005	Adilahmed I Lingadahalli	Power BI Competition	Dept. of ISE BIET, Davangere	9th Dec 2024	Participated & awarded	2nd Prize
10	4BD22IS182	Vijayalakshmi S	Power BI Competition	Dept. of ISE BIET, Davangere	9th Dec 2024	Participated & awarded	2nd Prize

11	4BD22IS155	Spoorthi GR	Power BI Competition	Dept. of ISE BIET, Davangere	9th Dec 2024	Participated & awarded	2nd Prize
12	4BD23IS411	Sameer S Abbigeri	Web Fundamentals Learning Path	Try Hack Me	3rd Dec 2024	-	-
13	4BD23IS411	Sameer S Abbigeri	Introduction to Cyber Security Learning Path	Try Hack Me	22nd Oct 2024	-	-
14	4BD23IS411	Sameer S Abbigeri	Pre-Security Learning Path	Try Hack Me	21st Oct 2024	-	-
15	4BD22IS175	Udaya A S	Cybersecurity Analyst Job Simulation	-	13th Sep 2024	-	-
16	4BD22IS175	Udaya A S	Google Cybersecurity	-	26th July 2024	-	-

Students' Participation in NPTEL Courses
For the Year 2024-25

Sl. No	Name of the Students	NPTEL Courses	Organized By	Date	Participated / Presented/ Published/ Completed	Prizes won (if any)
1	ANUSHA BT	NPTEL Online Certification- Project Management	Indian Institute of Technology Roorkee	Feb-Apr 2025	Completed	63%
2	NEHA HOSURE	NPTEL Online Certification- Cloud Computing	Indian Institute of Technology Kharagpur	Jan-Apr 2025	Completed	55%
3	PUNITH RAJU BANAKAR	NPTEL Online Certification- Cloud Computing	Indian Institute of Technology Kharagpur	Jan-Apr 2025	Completed	56%
4	KHUSHI N S	NPTEL Online Certification- Cloud Computing	Indian Institute of Technology Kharagpur	Jan-Apr 2025	Completed	55%
5	NEHA HOSURE	NPTEL Online Certification- Data Analytics with Python	Indian Institute of Technology Roorkee	Jan-Apr 2025	Completed	60%
6	PUNITH RAJU BANAKAR	NPTEL Online Certification- Data Analytics	Indian Institute of Technology Roorkee	Jan-Apr 2025	Completed	60%

		with Python				
7	ADARSH PAL S	NPTEL Online Certification- Foundation of Cloud IoT Edge ML	Indian Institute of Technology Kharagpur	Feb-Apr 2025	Completed	66%
8	SRUSHTI BM	NPTEL Online Certification- Programming in Java	Indian Institute of Technology Kharagpur	Jan-Apr 2025	Completed	78%
9	ADITYA S KALLUR	NPTEL Online Certification- Programming in Java	Indian Institute of Technology Kharagpur	Jan-Apr 2025	Completed	55%
10	SUPRIYA D B	NPTEL Online Certification- Programming in Java	Indian Institute of Technology Kharagpur	Jan-Apr 2025	Completed	71%
11	KHUSHI N S	NPTEL Online Certification- Project Management	Indian Institute of Technology Roorkee	Feb-Apr 2025	Completed	54%
12	Shree Gururaj Kulkarni	NPTEL Online Certification- The Joy of Computing using Python	Indian Institute of Technology Madras	Jan-Apr 2025	Completed	81%
13	Shree Gururaj Kulkarni	NPTEL Online Certification- Machine Learning for Engineering and science applications	Indian Institute of Technology Madras	Jan-Apr 2025	Completed	61%
14	Shree Gururaj Kulkarni	NPTEL Online Certification- Programming, Data Structures and Algorithms Using Python	Indian Institute of Technology Madras	Jan-Mar 2025	Completed	63%
15	Shree Gururaj Kulkarni	NPTEL Online Certification- Python for Data Science	Indian Institute of Technology Madras	Jan-Feb 2025	Completed	77%
16	Shree Gururaj Kulkarni	NPTEL Online Certification- Programming in Java	Indian Institute of Technology Kharagpur	Jan-Apr 2025	Completed	61%

Faculties' Participation in NPTEL Courses for the Year 2024-25

Sl. No	Name of the Students	NPTEL Courses	Organized By	Date	Participated / Presented/ Published/ Completed	Prizes won (if any)
1	DR ANITHA G	NPTEL Online Certification- Data Mining	Indian Institute of Technology Kharagpur	Jan-Mar 2025	Completed	75%
2	Prof. Chaitra K J	NPTEL Online Certification- Data Mining	Indian Institute of Technology Kharagpur	Jan-Mar 2025	Completed	64%
3	Prof. Roopa D E	NPTEL Online Certification- Data Mining	Indian Institute of Technology Kharagpur	Jan-Mar 2025	Completed	78%
4	Prof. Puneeth S P	NPTEL Online Certification- Data Mining	Indian Institute of Technology Kharagpur	Jan-Mar 2025	Completed	63%
5	Prof. Madhuri Martis	NPTEL Online Certification- Data Mining	Indian Institute of Technology Kharagpur	Jan-Mar 2025	Completed	56%
6	Prof. Roopa D E	NPTEL AICTE FDP- Data Mining	Indian Institute of Technology Kharagpur	Jan-Mar 2025	Completed	78%
7	Prof. Hemashree H C	NPTEL Online Certification- Data Mining	Indian Institute of Technology Kharagpur	Jan-Mar 2025	Completed	65%
8	Prof. Priya V	NPTEL Online Certification- Deep Learning	Indian Institute of Technology Madras	Jul-Oct 2024	Completed	51%

Rakuten (AI-nization 4.0 Technology Conference) Bangalore Visit on 16th Nov 2024.

Infosys (Springboard) Bangalore, Visit on 23rd Aug 2024.

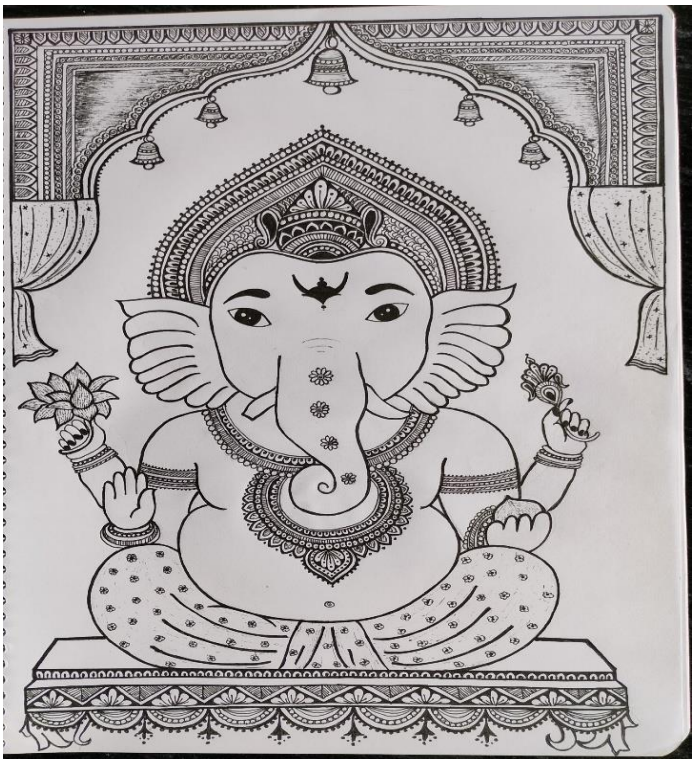
Placements for the year 2024-2025

Placement Percentage: 78.69%

Sl No.	Company Details	No. of students Placed
1	GenC Select	6
2	Zepto	1
3	Prerana	2
4	KPMG	5
5	Tap Academy	3
6	TCS,Ninja	34
7	TCS, Digital	3
8	Infosys	1
9	Kasmo	6
10	Dhee Coding	6
11	Sasken	1
12	X-ciencia Technologies PVT LTD	2
13	IBM	2
14	Palle Technologies	17

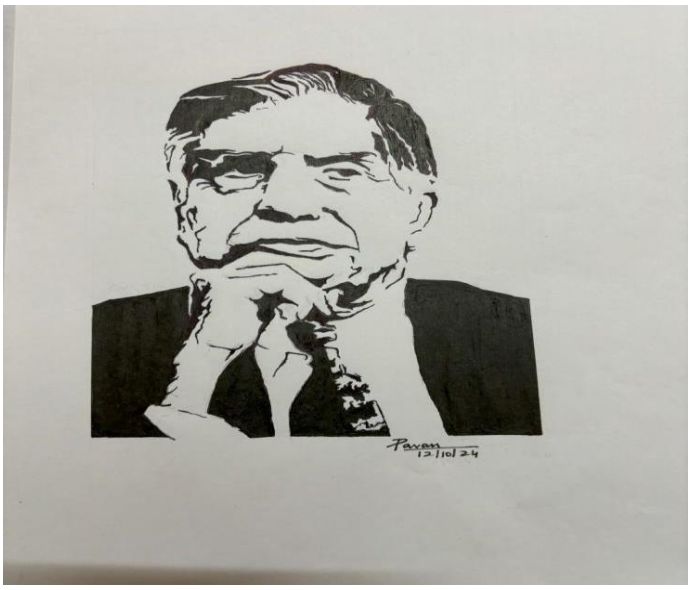
15	**CodeYoung**	**4**
16	**Qspiders**	**25**
17	**Friss India**	**6**
18	**INube**	**1**
19	**Hashedin**	**2**
20	**Intrainz**	**12**
21	**Pentagon Space**	**6**
22	**Echo Brains**	**5**
23	**SkyIIX**	**3**
24	**Tech Mahindra**	**6**
TOTAL		**159**

Art work by students



Name: Spoorthi G R
USN: 4BD22IS155

Name: Sumanth P Bellad
USN: 4BD22IS161



Name : Adarsh R Bongale
USN :4BD21IS077
Sem/Sec:7th A

Name : Pavan Kumar J S
USN :4BD22IS004
Sem/Sec:5th A

Articles

Agentic AI: The Next Stage of Autonomous Intelligence

Artificial Intelligence is undergoing a major shift with the emergence of **Agentic AI**, a new class of intelligent systems capable of autonomous reasoning, planning, and action. Unlike traditional generative AI, which answers queries or produces content, Agentic AI can independently execute multi-step tasks, make decisions, and adapt to changing objectives. This advancement marks an evolution from AI as a *tool* to AI as an *active collaborator* in digital environments.

At the core of Agentic AI are powerful large language models (LLMs) combined with specialized components such as planning engines, memory modules, and tool-integration interfaces. These elements allow AI agents to break complex problems into structured steps, retrieve and process information, call external tools or APIs, evaluate outcomes, and continuously refine their actions. The result is a system capable of performing end-to-end workflows with minimal human oversight.

The impact of Agentic AI is already visible across industries. In software development, autonomous coding agents can generate, test, and optimize programs. In healthcare, research agents support diagnosis, analyze medical literature, and assist in clinical decision-making. Businesses are adopting AI agents to automate operations, forecast trends, manage documents, and deliver personalized customer services. Manufacturing sectors are leveraging Agentic AI for predictive maintenance, process optimization, and intelligent robotics coordination. Even education is benefiting as AI agents create adaptive learning paths, evaluate assignments, and provide real-time feedback to students.

However, the rapid rise of Agentic AI also brings new challenges. Ensuring safety, transparency, and accountability becomes crucial as agents operate with increasing autonomy. Ethical concerns—such as bias, data privacy, and misuse—must be addressed through robust governance frameworks and human-in-the-loop oversight. Building trust in these systems will be essential for responsible adoption.

Looking forward, Agentic AI is expected to play a central role in digital transformation. Its ability to think, act, and collaborate positions it as a foundational technology for Industry 5.0, smart enterprises, and intelligent educational ecosystems. As organizations and institutions embrace this paradigm, engineers and students must equip themselves with the skills to design, monitor, and ethically guide agentic systems.

Agentic AI is not just the next milestone in AI evolution—it is a gateway to a future where machines take initiative, assist intelligently, and amplify human capability.

Prof. Puneeth S P
Assistant Professor
Dept. of IS&E, BIET.

Essential Steps to Boost your Windows PC Performance

1. Disable slow startup apps

Open Settings > Go to Apps > Open Startup >Turn off apps you do not use often. This reduces boot time.

2. Uninstall unused programs

Open Settings > Go to Apps > Uninstall heavy applications that you don't need anymore. This frees RAM and storage.

3. Clean temporary files

Open Settings > System> Storage. Run Storage Sense. Remove temp files, old updates, and cache.

4. Stop background apps

Settings > Apps > Installed apps. Disable background activity for apps you do not need.

5. Increase virtual memory

Search for Performance Options > Open Advanced tab > Increase virtual memory to 1.5 times your RAM. Example: If you have 8 GB RAM, allocate approximately 12 GB.

6. Disable visual effects

Search for “Adjust the appearance of Windows” > Choose “Adjust for best performance”. This makes the UI faster.

7. Turn off animations

Settings > Accessibility >Visual effects > Turn off animation effects and transparency.

8. Update Windows and drivers

Install updates from Settings. Windows Update.

Update GPU drivers from Intel, AMD or **Nvidia** for better performance.

9. Use an SSD

If your computer is still using the HDD, upgrade to SSD. This gives a big speed boost for booting and apps.

10. Free up startup RAM with Task Manager

Open Task Manager. Identify apps using high CPU or memory. Disable or remove heavy applications.

11. Scan for malware

Run Windows Security. Quick scan. Remove suspicious software that slows your system.

12. Keep desktop clean

Reduce desktop icons. Each icon loads at startup, so this improves boot time.

13. Use High Performance mode

Settings > System > Power > Select Best Performance.

14. Clean browser junk

Clear cookies, history and disable unused extensions in Chrome or Edge.

Prof. Santhosh T.
Assistant Professor,
Dept. of IS&E, BIET, Dvg.

Title: The Rise of Edge AI: Revolutionizing Real-Time Computing

In 2025, Edge AI — the fusion of machine learning and edge computing — is transforming real-time processing. It allows devices like smartphones, IoT sensors, and autonomous vehicles to analyse data locally, without relying on constant cloud connectivity.

What is Edge AI?

Edge AI involves deploying AI models on edge devices, allowing them to perform tasks such as image recognition, speech processing, or anomaly detection locally. This significantly reduces latency, improves privacy, and ensures that systems can operate even in environments with limited or no internet access.

Why Is It Trending?

1. **Faster Decision-Making**: Applications like autonomous driving or industrial robotics require split-second responses. Edge AI ensures ultra-low latency by eliminating the delay of sending data to the cloud and back.
2. **Privacy and Security**: By processing data locally, sensitive information remains on the device, reducing the risk of data breaches and meeting stricter data privacy regulations.
3. **Reduced Bandwidth Usage**: Only essential insights are transmitted to the cloud, cutting down on network congestion and cost.
4. **Hardware Advances**: Chips like Apple's Neural Engine, Google's Edge TPU, and NVIDIA's Jetson are optimized for local AI inference, making Edge AI more accessible and powerful.

Applications in 2025

- **Healthcare**: Wearables with Edge AI monitor patient vitals in real time and alert for abnormalities without cloud dependency.
- **Smart Cities**: Traffic cameras use AI to analyze vehicle flow and detect violations instantly.
- **Retail**: Edge AI powers intelligent checkout systems, shelf monitoring, and personalized customer experiences.
- **Agriculture**: Drones and sensors assess crop health and soil conditions on the field itself.

Challenges and Future Directions

Edge AI still faces hurdles like limited device power, model size, and energy use. Ongoing research in areas like TinyML, federated learning, and neuromorphic computing aims to overcome these. As demand for real-time, decentralized intelligence grows, Edge AI is set to play a key role in future computing.

Prof. Rekha B.H
Assistant Professor,
Dept. of IS&E,
BIET, Dvg.

DataLyze: Transforming Data Analysis with Agentic AI

In today's data-driven world, the biggest challenge is **not collecting data, but understanding it quickly enough to make decisions**. Existing tools like Power BI and Tableau, while powerful, require structured data and technical expertise, creating bottlenecks for SMEs, educational institutions, and non-technical

teams.

DataLyze is an innovative Agentic AI platform designed to overcome these limitations. Unlike traditional AI models that follow predefined instructions, **Agentic AI in DataLyze works autonomously**, understanding unstructured data, analyzing it intelligently, and visualizing insights without manual configurations.

Key capabilities include:

- **Automatic Data Understanding:** Detects data types, structures, and hidden patterns autonomously.
- **AI-Powered Analysis:** Generates quick, meaningful insights with built-in ML algorithms.
- **Automated Visualization:** Creates appropriate charts and dashboards instantly.
- **Conversational Chatbot:** Allows users to ask questions in natural language and receive real- time insights without coding.

By combining these features, DataLyze **democratizes data analysis**, empowering anyone to gain insights without needing a technical background. It can significantly **boost productivity**, reduce dependency on data teams, and enable faster, smarter decisions across sectors such as healthcare, retail, education, and research.

Currently under development as an MVP, DataLyze aims to integrate advanced predictive analytics and enterprise API capabilities in the future. Its mission is clear – to build an AI analyst that works alongside humans, making data accessible, understandable, and actionable for all.

DataLyze has the potential to transform how organizations use their data, bridging the digital skill gap and supporting India's vision for inclusive AI adoption and digital empowerment.

"With DataLyze, we envision a future where data is no longer intimidating but becomes a powerful, effortless tool for every individual and organization."

Arun Ramesh Chavan
Student, Dept. of IS&E,
BIET, Dvg.

Photography

Name: Spoorthi G R
USN: 4BD22IS155

Name: Spoorthi G R
USN: 4BD22IS155

Name: Sumanth P Bellad
USN:4BD22IS161

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