Adi Shankara Institute of Engineering and Technology

Sakshin

Monthly Newsletter of Dept. of CSE

2025 JULY

VISION

Nurturing globally competent Computer science and Engineering graduates capable of taking challenges in the industry and Research & Development activities.

MISSION

M1. Imparting quality education to meet the needs of industry, and to achieve excellence in teaching and learning.

M2. Inculcating value-based, socially committed professionalism for the development of society.

M3. Providing support to promote quality research.

ABOUT ASIET

Adi Shankara Institute of Engineering & Technology in Kalady, established by the Adi Sankara Trust, aims to provide value-driven technical education that promotes professional excellence and ethical values. Under the blessings of the Jagadgurus of Sringeri Sharada Peetham, the trust has over 50 years of experience in managing educational institutions. The institute focuses on the holistic development of its students.

CSE Department Signs MoU with ASAP Kerala

The Department of Computer Science and Engineering, ASIET has signed a Memorandum of Understanding (MoU) with ASAP Kerala (Additional Skill Acquisition Programme Kerala), a State Public Sector Undertaking under the Higher Education Department, Government of Kerala.

This collaboration aims to enhance the skill sets of students through industry-relevant training, workshops, and certification programmes, bridging the gap between academic learning and industry demands. By leveraging ASAP's expertise and resources, the department seeks to provide students with greater exposure to emerging technologies and job-ready competencies.

The MoU marks a significant step towards empowering students with practical skills, thereby boosting their employability and preparing them for the evolving technology landscape.

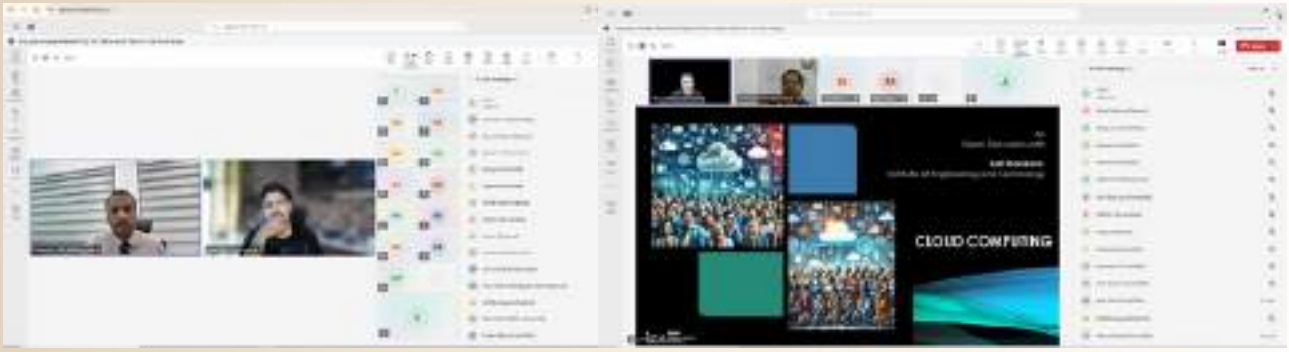
TCS Online Faculty Enrichment Programme on Cloud & AI: A 3-Day Insightful Journey

TCS 3-Day Online Faculty Enrichment Programme (FEP) on Cloud Computing and AI Applications – Industry & Research Perspectives and Practices, held from June 30 to July 2, 2025, organised by the Department of Computer Science and Engineering, ASIET, in association with Tata Consultancy Services (TCS):

Day 1 – June 30, 2025

Inaugural Ceremony & Cloud Fundamentals

The event began with a formal inaugural session, featuring addresses by dignitaries from ASIET and TCS. Mr. Manu Pradeep, Enterprise Architect (IoT), TCS Kochi, delivered the first technical session on Cloud Fundamentals. He covered cloud deployment and service models (IaaS, PaaS, SaaS), benefits, challenges, and real-world applications, giving participants a strong foundation in modern cloud systems.



Day 2 – July 1, 2025

Essential Cloud Services & Management

The second session, also led by Mr. Manu Pradeep, focused on virtualization, core cloud services (compute, storage, networking, database), and cloud security (IAM, encryption, MFA). Practical insights into Microsoft Azure were shared, along with academic-oriented use cases, making the session highly relevant for faculty integrating cloud into teaching.

Day 3 – July 2, 2025

Cloud's Role in AI & Generative AI

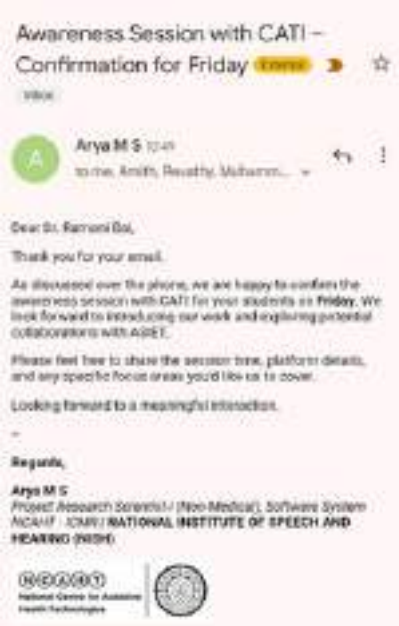
Day 3 explored the synergy between cloud technology and Generative AI (GenAI). Modules included cloud adoption and cost management, GenAI use cases, and cloud governance and DevOps practices. The session concluded with an interactive Q&A on implementing cloud and GenAI in academic settings.

Valedictory Session

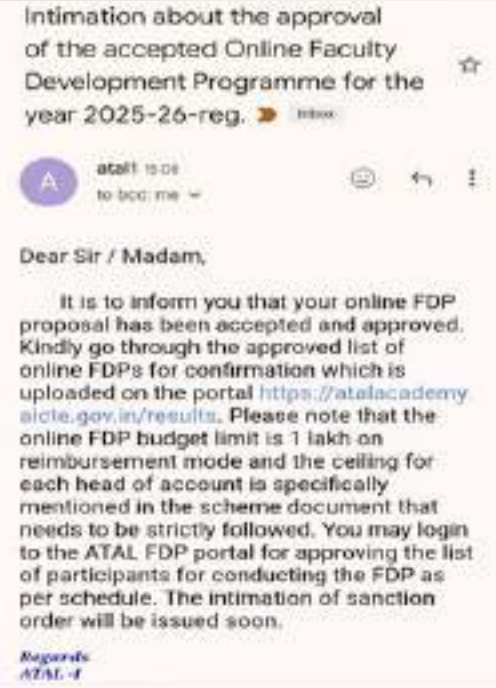
The programme concluded with a valedictory session featuring reflections from TCS and ASIET leadership. Participants expressed appreciation for the depth, clarity, and practical orientation of the sessions. The resource person, Mr. Manu Pradeep, was widely praised for his expert delivery throughout the 3-day journey.

Confirmation of awareness session with CATI

A great progress for us to collaborate with NISH(CATI).
An awareness session is being organized in collaboration with the Centre for Assistive Technologies and Innovation (CATI) under the National Institute of Speech and Hearing (NISH). The session aims to introduce students to the field of assistive health technologies, highlight real-world applications that support individuals with disabilities, and explore opportunities for innovation, research, and collaboration. It will provide valuable insights into how technology can be used to create inclusive solutions that improve quality of life.



Approval of Online Faculty development Programme for the year 2025-26



Intimation about the approval of the accepted Online Faculty Development Programme for the year 2025-26-reg. Inbox

atal! to cc: me

Dear Sir / Madam,

It is to inform you that your online FDP proposal has been accepted and approved. Kindly go through the approved list of online FDPs for confirmation which is uploaded on the portal https://atalacademy.aicte.gov.in/results. Please note that the online FDP budget limit is 1 lakh on reimbursement mode and the ceiling for each head of account is specifically mentioned in the scheme document that needs to be strictly followed. You may login to the ATAL FDP portal for approving the list of participants for conducting the FDP as per schedule. The intimation of sanction order will be issued soon.

Regards
ATAL-I

The CSE department received the approval for conducting ATAL online FDP on "Advancements in Cloud and Edge Computing - Research and Industry Perspectives" with a budget of 1 Lakh.

The proposed Online Faculty Development Programme (FDP) has been approved under the AICTE-ATAL scheme for the academic year 2025–26. The approval confirms the institute's continued efforts in faculty skill enhancement and academic excellence. The budget for the FDP is capped at ₹1 lakh under reimbursement mode, and all expenditure must adhere strictly to the financial guidelines provided in the scheme document.

S3 CSE Class Committee Meeting: A Collaborative Step

The Class Committee Meeting for Semester 3 CSE students was held recently with the participation of faculty members, class advisors, and student representatives from all three S3 sections. The session, presided over by Dr. Ramani Bai V. Head of the Department, focused on reviewing academic progress and collecting feedback directly from the students.

Class reps shared insights on subject clarity, teaching pace, and lab sessions. Faculty addressed the points raised and assured necessary improvements. The HOD appreciated the collaborative spirit and emphasized the importance of student-teacher dialogue for better academic outcomes.

The meeting concluded with a shared commitment to continuous improvement and an engaging learning environment.

S5 CSE Advisory Committee Meeting

The Advisory Committee Meeting for Semester 5 CSE students was successfully held, bringing together the HoD, class advisors, and all student. The session focused on discussing overall academic performance, curriculum pace, and placement preparedness.

Students actively shared their feedback and concerns, especially related to subject load and upcoming projects. Faculty addressed queries and ensured support for academic and career-related guidance.

The meeting served as a platform for transparent communication, ensuring a smoother learning journey as the students step into their core semesters.

µLearn Orientation Session Successfully Held at ASIET

The µLearn Orientation Session was successfully conducted on 10th July 2025 at the Main Seminar Hall, ASIET, from 2:10 PM to 4:00 PM.

The session was led by Joel Basil Kurian, Ex-Campus Associate, µLearn Foundation, who engaged the audience in an insightful introduction to µLearn's mission, opportunities, and collaborative learning culture. Attendees gained valuable insights on leveraging µLearn's resources for skill development, networking, and personal growth.

The event marked an inspiring start for students to explore new learning paths and actively participate in the µLearn community.

GATE OUTREACH PROGRAM

Appreciation from resource person

The Department of Computer Science and Engineering is pleased to share that our Institute received an appreciative review from the GATE JAM Office, IISc Bangalore, for our enthusiastic participation in the GATE JAM 2026 Outreach Program. The outreach session was successfully scheduled and conducted on 21st July 2025 at 3:00 PM at our campus. The IISc ambassadors, Mr. Praveen P and Mr. Ashfaq Ashraf Chathoth from the Department of Management Studies, expressed their sincere appreciation for the smooth coordination and active involvement by our department. Their visit marked a valuable opportunity for students to gain insights into the GATE examination and its evolving structure, and further strengthened academic ties with IISc.

Celebrating the Spirit of Reading: Prize Distribution Ceremony at Adi Shankara






A vibrant prize distribution ceremony was held at Adi Shankara to honor the winners of the Reading Week competitions organized by the Literacy Club. The event took place on Wednesday, bringing together enthusiastic students, faculty members, and coordinators who supported and celebrated the importance of reading and literacy. The winners were felicitated for their outstanding performances, encouraging a culture of active reading and creative engagement across the campus.

Value added Course-Pydata Prodigy :Python Bootcamp

The Department of Computer Science and Engineering at Adi Shankara Institute of Engineering and Technology is organizing a value-added course titled “PyData Prodigy: Python Bootcamp for Data Management Professionals” for the 2024–2028 batch CSE students. The program, conducted in collaboration with ASAP, a Government of Kerala initiative, aims to build a strong foundation in Python programming and data management. It will be held from 29th July to 2nd August 2025, from 9:00 AM to 4:00 PM, across the ADP Lab, SI Lab, and PL Lab.

The bootcamp is designed to help students understand the fundamentals of Python and its application in data management using libraries like Pandas and NumPy. Participants will also learn to perform data cleaning, transformation, and validation, and gain experience in data visualization using Matplotlib and Seaborn. Through hands-on training with real-world datasets, the course will guide students in building practical workflows and equip them for advanced studies in data science, machine learning, and data engineering. Sessions will be led by experienced mentors from Riglabs Collective, providing industry-aligned training and exposure to modern tools and techniques in the data domain.

Internship Completed by S5CSA Students in this academic year

Litmus7
1. Aaryatha P R
2. Asher Antony Louis
3. Aleena Ann Francis

Pacelab
4. Ajana C U
5. Afiya Fathima
6. Aleena George
7. Ashna Rose
8. Angel Susan
9. Anjana Santhosh
10. Anagha S N
11. Anagha T U
12. Ardhra Antony
13. Alan Paulose
14. Ananya K
15. Adwaith Krishna
16. Adithya R
17. Akhil V

Elevate labs (online)
18.Archana Muraleedharan
19. Ankita Syam

Metaloop
20. Nimisha N S
21. Anjana Sarasan
22. Anna Joy
23. Abin Joy

Techmaghi
- 24. Aravind Mohan

Cydez
25. Anfas mooppan
26. Aryan v
27. Abishek krishna
28. Ameer hussain (online)
29. Ajith j
30. Albert vincent
31. Adwaith krishna c r
32. Abhay krishna

Stem robotics
33. Anliya D'cunja
34. Anwa A.V (online)
35. Anjana R Nair (online)
Ameer Hussain (online)

ICT
36. Anamika Umesh

keltron
37. Archana a

Deltaware Solutions
38. Abhiram V.S

Corizo(online)
39. Alan K Jaison
40. Adithyan k s

facein
41. Alwin P
42. Aneena ann George

Wahy lab solutions (online)
43. Able Eldho

GJ Global
44. Ajishmi Prakash

Retechnox
- 45. Advait Rajesh Nair

Internship Completed by S5CSB Students in this academic year

📌 ICT
- Krishnanjana AU
- Hisniya MN
- Geethika Binu
- Deril K Shaju
- C Hridya Ajay
- Devika PS
- Kamal Krishna
- Devananda Anil
- Asvin Alias
- Fidha Fathima
- Jiya Raju
- Evelin Benny
- Gourinandana KU
- Lakshmipriya KJ
- Devika CN
- Hridya Paulose
- Fathima Sanam
- Govindan S
- Mathew Joseph

📌 NEST
- Haala
- Hiba Fathima
- Fathima Neslin
- Gouri Jayan
- Gouri Nandha CJ
- Mariya Francis
- Kavya Suresh
- Daniel Joshy
- Dawn Reji

📌 GJ Global (Experience-based internship)
- Bashim Hadi

📌 NEXTU EMPOWER PVT LTD (Experience-based internship)
- Govindan

Internship Completed by S5 CSE C Students in this academic year

Megha E B,
Flutter
Luminar Technolab

Muhammed Nihal P A
Flutter
Luminar Technolab

Muhammed Nihal P A
MERN Stack
ICT Academy of Kerala

Students Corner

JULY 2025

Nandana Rajesh
MERN Stack
Luminar Technolab

Nandana Silju
MERN Stack
Luminar Technolab

Nandhana S Nair
Flutter
Luminar Technolab

Neha S
Flutter
Luminar Technolab

Paul Saju
Flutter
Luminar Technolab

Paul Saju
Flutter
Stem Robotics

Rajeswary M G
MERN Stack
Luminar Technolab

Reetha Mathew
MERN Stack
Luminar Technolab

Rida Zahara N
Java Development
TechnoHacks

Rida Zahara N
AI and ML
Nest

Rishika H Das
Flutter
Luminar Technolab

Rohith Rajeevan
MERN Stack
Luminar Technolab

Roshan Varghese
AI, Agnirva - Summer 2025

Sana Fathima Salim
Flutter
Luminar Technolab

Sandia Jees
MERN Stack
Luminar Technolab

Sania Joby
MERN Stack
Luminar Technolab

Sania Sarun
MERN Stack
Luminar Technolab

Sanjana Elizabeth K V
Flutter
Luminar Technolab

Sanjana Elizabeth K V
MERN Stack
ICT Academy of Kerala

Shadi Sarath
Web Development
Internshala

Shomy M
Python Django
Luminar Technolab

Sidharth Santhosh
MERN Stack
Luminar Technolab

Sreerag K B
MERN Stack
Luminar Technolab

Theertha Prakasan
MERN Stack
Luminar Technolab

Vaishnav M S
MERN Stack
STEM Robotics

Internship Completed by S7 CSE C Students in this academic year

1. Narayani Mahadevan
 • Company: Algon Solutions
 • Role: Software Development Engineering
 • Duration: June 9 – July 20
2. Vishnu V A
 • Company: Braddock Infotech Pvt. Ltd
 • Role: Project Trainee
 • Duration: May – June
3. Paul Eldhose
 • Company: GLOBOSOFT
 • Role: Flutter Developer
 • Duration: June 2 – July 18
4. Parvathy Unnikrishnan
 • Company: Techmaghi
 • Role: Data Science & Machine Learning
 • Duration: June 15 – June 21
5. Nagul Jagadish
 • Company: Algon Solutions
 • Role: Software Development Engineering
 • Duration: June 9 – July 20
6. Sreeraj Rajeev
 • Company: Aitinary AI
 • Role: Software Developer Intern
 • Duration: June 10 – August 10
7. Nisari PS
 • Company: Algon Solutions
 • Role: Software Development Engineering
 • Duration: June 9 – July 20
8. Nirupama Venugopal
 • Company: Algon Solutions
 • Role: Software Development Engineering
 • Duration: June 9 – July 20
9. Nafeesa A S
 • Company: Algon Solutions
 • Role: Software Development Engineering
 • Duration: June 9 – July 20
10. V. Vijayalakshmi
 • Company: Pacelab
 • Role: Cybersecurity Intern
 • Duration: June 13 – June 26
11. Ria Teressa Paul
 • Company: Algon Solutions
 • Role: Software Development Engineering
 • Duration: June 9 – July 20
12. Rakshit Sudheer Nair
 • Company: Algon Solutions
 • Role: Software Development Engineering
 • Duration: June 9 – July 20
13. William San
 • Company: Fawstech Innovations
 • Role: Embedded ML Engineering
 • Duration: June 2 – June 27
14. Sona Deyo
 • Company: Algon Solutions
 • Role: Software Development Engineering
 • Duration: June 9 – July 20
15. Sai Asok
 • Company: Globosoft Solutions Pvt. Ltd
 • Role: Flutter Development Intern
 • Duration: June 2 – July 18
16. Vishal Ratheesh
 • Company: Cyborg AI Gen Automation
 • Role: Data Science & Machine Learning
 • Duration: June 23 – June 29
17. Swetha Vijayakumar
 • Company: Al Ittefaq Steel Products Co
 • Role: IT Infrastructure and Security Intern
 • Duration: May 25 – June 25
18. Premkrishna V P
 • Company: InternPe
 • Role: Python Programming Intern
 • Duration: June 16 – July 13

Internship Completed by S7CSA Students in this academic year

Aasif Azfer
- Company: ICT, Koratty Infopark
- Role: Full stack development using MERN stack
- Duration: June 16 – July 20

Aathira K Gautham
- Company: Metaloop Global IT Services, Kochi
- Role: Designing of Android Application
- Duration: May 28 – June 3

Abhijith P Anil
- Company: Metaloop Global IT Services, Kochi
- Role: Designing of Android Application and UI/UX design
- Duration: May 28 – June 3

Abhinav S
- Company: Metaloop Global IT Services, Kochi
- Role: Advanced Programming in Python
- Duration: June 11 – June 17

Abhirami P D
- Company: InternPe
- Role: AI/ML
- Duration: June 9 – July 6

Abin Vinson
- Company: Metaloop Global IT Services, Kochi
- Role: Cybersecurity and Ethical Hacking
- Duration: June 9 – June 14

Able Gerard Saji
- Company: Metaloop Global IT Services, Kochi
- Role: Designing of Android Application and UI/UX design
- Duration: May 28 – June 3

Abna Basheer
- Company: Metaloop Global IT Services, Kochi
- Role: Designing of Android Application and UI/UX design
- Duration: May 28 – June 3

Adarsh S
- Company: Fawstech Robotics Pvt Ltd, Palarivattom, Kochi
- Role: App Development using Flutter
- Duration: June 9 – June 14

Adhithya K J
- Company: Metaloop Global IT Services, Kochi
- Role: Designing of Android Application and UI/UX design
- Duration: June 11 – June 17

Aiswarya A Pillai
- Company: Metaloop Global IT Services, Kochi
- Role: Designing of Android Application and UI/UX design
- Duration: May 28 – June 3

Aiswarya Ullas
- Company: ICTAK Infopark, Koratty
- Role: Full stack development using MERN stack
- Duration: June 23 – July 23

Ajishna Jose
- Company: ICT Academy, Koratty
- Role: Full stack development using MERN stack
- Duration: June 16 – July 20

Akash Chandran
- Company: Metaloop Global IT Services, Kochi
- Role: Designing of Android app
- Duration: June 8 – August 15

Alby Thomas
- Company: Metaloop Global IT Services, Kochi
- Role: Cybersecurity and Ethical Hacking
- Duration: June 11 – June 17

Aleena Jameson
- Company: ICTAK Infopark, Koratty
- Role: Full Stack Development using MERN
- Duration: June 23 – July 23

Students Corner

JULY 2025

Amala B
• Company: ICTAK Infopark, Koratty
• Role: Full stack development using MERN stack
• Duration: June 23 – July 23

Amal Anish
• Company: Metaloop Global IT Services, Kochi
• Role: Cybersecurity and Ethical Hacking
• Duration: June 9 – June 14

Amal PM
• Company: Metaloop Global IT Services, Kochi
• Role: Cybersecurity and Ethical Hacking
• Duration: June 9 – June 14

Amitha Aji
• Company: Metaloop Global IT Services, Kochi
• Role: Designing of Android Application and UI/UX design
• Duration: May 28 – June 3

Anandhakrishnan P S
• Company: Metaloop Global IT Services, Kochi
• Role: Cybersecurity and Ethical Hacking
• Duration: June 9 – June 14

Ananya Vijayan
• Company: Metaloop Global IT Services, Kochi
• Role: Advanced Programming in Python
• Duration: June 11 – June 17

Aneena Biju
• Company: Metaloop Global IT Services, Kochi
• Role: Advanced Programming in Python
• Duration: June 11 – June 17

Aneeta Paul
• Company: ICTAK Infopark, Koratty
• Role: Full Stack Development
• Duration: June 23 – July 23

Alen Davis
• Company: Metaloop Global IT Services, Kochi
• Role: Cybersecurity and Ethical Hacking
• Duration: June 9 – June 14

Angel Yacob
• Company: Stem Robotics International, Trivandrum
• Role: Programming in Python
• Duration: June 16 – June 21

Anitha P J
• Company: Fawstech Robotics Pvt Ltd, Palarivattom, Kochi
• Role: Flutter android app development
• Duration: June 9 – June 14

Anjali A
• Company: Metaloop Global IT Services, Kochi
• Role: Advanced Programming in Python
• Duration: June 11 – June 17

Anjana Rajesh
• Company: ICT Academy, Koratty
• Role: Full stack development using MERN
• Duration: June 16 – July 20

Anu Babu
• Company: ICTAK Infopark, Koratty
• Role: Full Stack Development
• Duration: June 23 – July 23

Anushreya S Meledath
• Company: Metaloop Global IT Services, Kochi
• Role: Advanced programming in Python
• Duration: NIL

Aparna K Shaji
• Company: Metaloop Global IT Services, Kochi
• Role: Cybersecurity and Ethical Hacking
• Duration: June 9 – June 14

Aravind Balaji K J
• Company: Metaloop Global IT Services, Kochi
• Role: Designing of Android Application and UI/UX design
• Duration: November 6 – June 17

Aluf Ashraf K.K
• Company: ItsMyBot School of Computing
• Role: AI Automation
• Duration: June 7 – July 12

Internship Completed by S7CSB Students in this academic year

1. Lakshmi Susheelan
Zoople technologies
20 Days
Technology: Python

2. Fathima Nasrin P.N
Zoople technologies
20 Days
Technology: Python

3. Dolitta Pinhero
Zoople technologies
20 Days
Technology: Python

4. Dilna P
Zoople technologies
20 Days
Technology: Python

5. Likhitha S
Zoople technologies
20 Days
Technology: Python

6. Devika V R
Zoople technologies
20 Days
Technology: Python

7. Farhah E S
Zoople technologies
20 Days
Technology: Python

8. Gopika M J
Zoople technologies
20 Days
Technology: Python

9. Greena Maria Rajan
Zoople technologies
20 Days
Technology: Python

10. Fathima Muhammed
Zoople technologies
20 Days
Technology: Python

11. Farisha K N
Zoople technologies
20 Days
Technology: Python

12. Fathima Thaznim A A
Zoople technologies
20 Days
Technology: Python

13. Meenakshy K M
Facein Technologies
20 Days
Technology: Python Django

14. Christin Joji
InternPe
28 Days
Technology: AI/ML

15. Henry Martin
InternPe
28 Days
Technology: AI/ML

16. Bharath Anantharaman
InternPe
28 Days
Technology: AI/ML

17. Jeffin Jose
InternPe
28 Days
Technology: Java Programming

18. Meenu Krishna K S
InternPe
28 Days
Technology: Web Development

19. Jincy Varghese
InternPe
28 Days
Technology: Java Programming

20. Gokul P Manmadhan
InternPe
28 Days
Technology: Web Development

21. Krishnaveni Anil
PACELAB, Kadavanthra, Kochi
15 Days
Technology: Google Flutter

22. K M Tharian
Corizo
40 Days
Technology: Web Development

23. Christo Martin
Corizo
40 Days
Technology: Web Development

Congratulations, Dr. Sreedevi R. Krishnan on successfully defending Ph.D. thesis

Hearty Congratulations, Dr. Sreedevi R. Krishnan on successfully defending your Ph.D. thesis titled: “Hybrid Transfer Learning Models for Video Anomaly Detection in Surveillance Systems” from Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore!

Wishing you continued success in your academic and research journey!

Also had a department celebration commemorating this moment of success!

Prof. Sanjuna K R Serves as Session Chair at ACCESS 2025

Prof. Sanjuna K R, Department of Computer Science and Engineering, served as Session Chair for Session 12, Track 3: Computational Intelligence in Computing, Communication, Embedded and Secure Systems at the 2025 4th International Conference on Advances in Computing, Communication, Embedded and Secure Systems (ACCESS). The conference, hosted by the Departments of ECE and EEE, ASIET, was sponsored by MeitY, Government of India and technically co-sponsored by the IEEE Kerala Section, and was held from June 11–13, 2025.

Faculty Participation at Kerala Innovation Festival 2025

Prof. Sharika T. R and Prof. Jerin Varghese from Adi Shankara Institute of Engineering and Technology actively participated in the Kerala Innovation Festival 2025, held at the Kerala Startup Mission Skill Park, Kalamassery on 25th July 2025. This prestigious event, organized under the umbrella of Kerala Startup Mission (KSUM), serves as a vibrant platform for innovators, technologists, educators, and entrepreneurs to showcase cutting-edge ideas and collaborative projects driving the state's innovation ecosystem.The festival provided a valuable opportunity for the faculty members to engage with leading startups, industry experts, and fellow academicians, gaining insights into the latest trends in technology, innovation, and entrepreneurship. Their presence not only represented the institute at this forward-thinking event but also opened doors for potential academic-industry collaborations and exposure for students in upcoming innovation challenges and startup initiatives.

CS Department Team Presents Research at International Conference in Pune

We are delighted to announce that a research team from the Department of Computer Science and Engineering, ASIET presented their paper titled
"An AI-Driven Crowd Anomaly Detection for Public Safety" at the International Conference on Information, Implementation, and Innovation in Technology (ICIIT 2025), held on 5th July 2025.
The paper was co-authored by Ms. Divya K S, Ms. Neetha K Nataraj, Ms. Akshaya Jayaraj, Mr. Aasif Rafeeck, Mr. Abhilash Asokan, and Mr. Amal N A, and was presented at the prestigious conference hosted by the International Institute of Information Technology, Pune.
The study proposes an AI-powered system capable of detecting unusual crowd behavior in public spaces, contributing significantly to safety and emergency response measures through real-time surveillance and predictive analytics.
The presentation marks a proud moment for the department, highlighting the team's commitment to impactful research in the field of artificial intelligence and public security.
Hearty congratulations to all the authors on this achievement!

CSE Faculty Members Serve as Resource Persons for Add-On Certificate Course

We are proud to share that Ms. Sharika T R , Ms. Akshaya Jayaraj from the Department of Computer Science and Engineering were awarded Certificates of Appreciation for their valuable contributions as Resource Persons during the Add-On Certificate Course in Advanced Medical Electronics with Practical Bio-Signal Processing using Python & QT-Octave.
The program, organized by the Department of Electronics and Biomedical Engineering, Adi Shankara Institute of Engineering and Technology, was held from 1st to 5th July 2025. The sessions focused on practical applications of signal processing using modern tools, enriching participants with hands-on experience and interdisciplinary insights.
Their participation reflects the department's commitment to academic collaboration and knowledge sharing across disciplines. Congratulations to both faculty members for this recognition!

CSE Faculty and Students Present Paper at ICACEBD-25

A team from the Department of Computer Science and Engineering proudly represented Adi Shankara Institute of Engineering and Technology at the International Conference on Advanced Communication, Energy and Big Data (ICACEBD-25), held on June 5–6, 2025, at G.H. Raisoni College of Engineering & Management, Nagpur.

The paper titled "A Real-Time Smart Bus Tracking System Using IoT and GPS for Public Transportation Optimization" was presented by faculty members Ms. Rosemary Varghese, Dr. Sanjuna K R, Ms. Teena George, and students Anannya Ajit V A, Anwesha Elna, and Edrin Biju MP.

Their work focused on the integration of IoT and GPS technology to improve real-time tracking and operational efficiency in public transport systems — a timely innovation with practical relevance for urban mobility challenges.

Congratulations to the team for their commendable contribution and active participation at this prestigious conference!

Faculty Serve as Reviewers for IEEE Co-Sponsored International Conference

We are proud to share that Ms. Gripsy Mannickathan, Ms. Akshaya Jayaraj, Dr. Sanjuna K R and Ms. Anila S, faculty members from the Department of Computer Science and Engineering, ASIET, were recognized for their outstanding contributions as Reviewers at the 4th International Conference on Advances in Computing, Communication, Embedded and Secure Systems (ACCESS 2025).

The conference, hosted by the Departments of ECE and EEE, ASIET, was held from June 11–13, 2025, and was sponsored by MeitY, Government of India, and technically co-sponsored by the IEEE Kerala Section.

Their involvement in the peer review process reflects their strong academic insight and commitment to research quality, contributing to the success and integrity of this prestigious event.

Congratulations to all four faculty members for this well-deserved recognition!

Welcome Aboard!

Welcome Ms. Naznin M Ali to CSE Department

We are delighted to welcome **Naznin** M Ali as an Assistant Professor in Computer Science. With over nine years of experience across the IT industry and education, she specialises in AI, blockchain, and digital learning technologies. She holds an M.Tech in Computer Science and Engineering and has expertise in Python, Java, and cloud technologies.

Faculty Participation in TCS Faculty Enablement Program on LLMs and Explainable AI

We are pleased to share that the faculty members of the Department of Computer Science and Engineering have successfully participated in the 6-Day Online Faculty Enablement Program (FEP) on "Advanced Large Language Models (LLMs) and Explainable AI", organized by the Department of CSE, ASIET, in collaboration with Tata Consultancy Services (TCS), Kochi, from June 16 to 21, 2025.

The program covered a broad spectrum of advanced topics, including Natural Language Processing (NLP), Transformer-based models, Prompt Engineering, LLM use cases, cloud-based deployment, and Explainable AI (XAI) tools such as SHAP and LIME. Expert-led sessions from TCS combined theoretical learning with hands-on practice using tools like Hugging Face, OLlama, and cloud platforms.

The collective participation of the CSE faculty in this cutting-edge program demonstrates their strong commitment to staying current with the latest advancements in AI and incorporating industry-relevant technologies into academic delivery. Their involvement reinforces the department's focus on excellence in AI education and research.

We congratulate all the faculty members for successfully completing this enriching and forward-looking academic initiative.

Department of Computer Science and Engineering Hosts Successful TCS Faculty Enablement Programs 2025

The Department of Computer Science and Engineering, Adi Shankara Institute of Engineering and Technology, in collaboration with TCS, successfully organized two impactful online Faculty Enablement Programs in 2025 — Advanced LLMs & Explainable AI (16–21 June) and Cloud Computing & AI Applications – Industry and Research Perspectives (30 June–2 July).

Led by TCS experts, the programs offered immersive training in Advanced LLMs, Responsible AI, Explainable AI, Cloud Computing, and AI Applications, covering NLP fundamentals, Transformer models, cloud-based deployment, and prompt engineering with a strong focus on ethics and transparency. Real-world case studies, interactive workshops, and the enthusiastic participation of the CSE department ensured an engaging and well-coordinated experience for faculty, scholars, and professionals.

Organizing Committee:

Overall Coordination & Inauguration: Ms. Sreedevi, Ms. Jyotsna | Scheduling & Communication: Ms. Ambily | Invitation, Registration & Finance: Mr. Jerin Varghese, Mr. Anjush | Session Coordinators: Ms. Alsha, Ms. Ambily | Attendance & Certification: Ms. Krishna Priya, Ms. Hitha | Compering: Ms. Shany | IT Support: Mrs. Deepa V. V., Mr. Ranjith, Mr. Rajesh, Mr. Joe | Brochures & Posters: Ms. Sreedevi | Participant Welfare: Ms. Jyotsna.

The programs concluded with the awarding of e-certificates and a celebration honoring all committee members with mementos, marking FEP 2025 as a remarkable success in advancing responsible and innovative AI applications in academia and industry.

Recognition of TCS FEP organizers from CS Faculty

Faculty members who successfully organized the 3-Day Online TCS FEP on “Cloud Computing & AI Applications – Industry and Research Perspectives & Practices” and the 6-Day Online TCS FEP on “Advanced LLMs & Explainable AI” were honored in an appreciation ceremony. The event featured cakes to celebrate the achievement, and e-certificates were presented as a token of recognition. This gesture acknowledged their dedication and effort in making both programmes a resounding success.

ASIET proudly received the award for the Third Largest Student Branch under the IEEE Kerala Section

Adi Shankara Institute of Engineering and Technology (ASIET) proudly received the award for the Third Largest Student Branch under the IEEE Kerala Section, a prestigious recognition presented by IEEE President Dr. Kathleen A. Kramer during the Golden Jubilee Celebrations of IEEE India Council and IEEE Kerala Section held on 23rd July 2025 at Hotel The Renai Cochin, Kochi. The event witnessed the presence of eminent IEEE leaders including Past President Mr. Thomas Coughlin, IEEE MTTS President Dr. Goutam Chattopadhyay, Region-10 Director-Elect Dr. Sameer S. M., and IEEE India Council Chair. Representing ASIET, Prof. Sharika T R (Assistant Professor, CSE & Chapter Advisor, IEEE CS SBC), along with SB Counselor Dr. Neema and other chapter advisors—Dr. Deepa Shankar, Prof. Gomathi, Prof. Jaimy, Prof. Anju, and Dr. Aswathy—graced the occasion, making it a moment of pride and recognition for the CSE Department and the entire IEEE SB ASIET family.

Phase 1 of Digitrove 2.0 Successfully Completed by IEEE CS SBC ASIET

In a major step towards digitizing local knowledge resources and improving community access to literature, IEEE Computer Society Student Branch Chapter (CS SBC), ASIET has proudly completed Phase 1 of the Digitrove 2.0 Library Cataloguing Project.

This phase marked the cataloguing of over 6000 books from the Cultural Library and Arts Society, Malayattoor. The project was carried out with precision and dedication by a team of 20 student volunteers, driven by their collective commitment to digital transformation and knowledge preservation.

Spearheaded under the insightful mentorship of Ms. Sharika T.R, Chapter Advisor of IEEE CS SBC ASIET, this initiative aimed to bring structure, accessibility, and digital reach to the vast collection housed by the library. With methodical attention to detail, each book was indexed and recorded, laying the groundwork for a fully digitized catalog that will soon be accessible to the public.

The successful completion of Phase 1 stands as a testament to the team's hard work and shared vision of using technology for societal benefit.

Hearty congratulations to the entire team for this impactful milestone—and here's to the next phases of Digitrove 2.0!

Achievement at Girlathon competition at the Kerala Innovation Festival.

A proud moment for Adi Shankara Institute of Engineering and Technology as a team of S5 Data Science and Artificial Intelligence students secured the First Runner-Up position in Girlathon, a women-centric coding and innovation challenge held as part of the Kerala Innovation Festival (KIF).

The event was organized by Developer Students Club (DSC), MACE in collaboration with Kerala Startup Mission, and brought together some of the brightest young women innovators from across the state. Competing under the team name "FourLoops", the students demonstrated outstanding technical and creative skills, developing a solution that impressed the judges and earned them a cash prize of ₹15,000.

The institute congratulates the team on their remarkable achievement and wishes them continued success in future innovation-driven pursuits.

Team Fible, honored with a special mention as the Women Major Team at HackGenAI

Team Fible, consisting of Mruthula S, Anna Catherine, and Ram Kiran Mohan from S3 AI, was honored with a special mention as the Women Major Team at HackGenAI - the largest Generative Al Hackathon in India. This event took place during the Kerala Innovation Festival, organized by the Kerala Startup Mission (KSUM) and supported by sponsors Pauly Jr. and Super Bryn Al.Chosen from more than 2000 participants nationwide, the team also received a cash prize in recognition of their exceptional performance

Generative AI Everywhere: How It's Changing the Student Experience in 2025

Not too long ago, artificial intelligence felt like science fiction—something only big tech companies or researchers used. But fast forward to 2025, and Generative AI is no longer just a buzzword. It's now a daily companion for students, embedded into apps, browsers, devices, and even our study habits.

Whether you're writing assignments, creating designs, preparing for an internship, or just trying to keep up with college life, GenAI is everywhere—and it's transforming everything.

In the Classroom: From Chalkboards to Chatbots
Tired of digging through textbooks? Generative AI tools like ChatGPT, Claude, Gemini, and Perplexity can now:

- Summarize entire chapters
- Explain tough concepts in simple language
- Generate sample questions for revision
- Translate notes into different languages

Even platforms like Notion, Canva, and MS Word have built-in AI assistants that help format content, rephrase ideas, and check grammar instantly.

"It's like having a 24/7 tutor who never complains or sleeps."

Assignments That Write Themselves?
With GenAI, generating essays, lab reports, or project proposals takes just a prompt. Tools like GrammarlyGO, QuillBot AI, and Jasper can structure, polish, and enhance your writing in seconds.

But here's the catch:
Are we learning or just relying?

That's the debate happening in classrooms right now. Many institutions have adopted AI-detection tools and emphasise the ethical use of GenAI — as an assistant, not a shortcut.

Internships, Resumes, and Placements: AI to the Rescue
Students are also turning to GenAI to prepare for careers. From building AI-optimized resumes to cracking mock interviews, AI tools have made the placement journey smarter.

Popular AI-based tools:

- Rezi, Teal, or Kickresume – build smart CVs
- InterviewWarmup by Google – practice common questions
- LinkedIn AI summaries – write your bio & posts
- Portfolio builders – auto-generate portfolio websites using your GitHub or design work

And yes, students are even building AI-powered startups or freelancing using tools like Midjourney for design and Copy.ai for marketing content.

It's not just about writing or coding—GenAI is boosting creativity too. Students now use AI to:

- Create music using Boomy or Suno
- Design art using DALL·E 3 or Adobe Firefly
- Build storyboards using Runway ML
- Generate entire videos from text with Sora

The New Normal: GenAI Integration in Daily Tools

GenAI is baked into almost everything now:

- Search: Perplexity, Brave AI, Bing Copilot
- Note-taking: Notion AI, Reflect Notes
- Coding: GitHub Copilot, Replit AI
- Emails: Gmail's smart reply + AI compose
- Voice assistants: Siri and Alexa now powered by LLMs

"Even my to-do list has a smarter brain than me now," jokes a fellow student.

But Use It Wisely...

With great power comes... great plagiarism risk, hallucinations, and over-reliance. AI doesn't always give correct or unbiased information, and using it blindly can hurt learning.

Final Thoughts

Generative AI is not replacing students — it's empowering us. Those who learn to use it wisely will have a major edge in academics, creativity, and career preparation.

In a world where "prompting" is becoming a new digital skill, the question is no longer whether you'll use GenAI... but how well you use it.

Gloriya Titto
S7 CSB

Edge AI and TinyML: Bringing Intelligence to the Edge

In recent years, Artificial Intelligence (AI) has achieved remarkable progress—largely driven by powerful cloud-based models capable of processing vast amounts of data. However, as we move deeper into an era dominated by connected devices, a new paradigm is emerging: Edge AI and TinyML.

These innovations bring intelligence directly to the devices we use every day—smartphones, wearables, IoT sensors, home appliances, and even microcontrollers—allowing them to perform AI tasks locally, without needing to connect to the cloud.

What is Edge AI?

Edge AI refers to the deployment of AI models on edge devices—hardware that sits at the "edge" of the network, such as smartphones, cameras, or embedded systems. These models can analyze data locally in real-time, making intelligent decisions without relying on cloud connectivity.

This is crucial for applications that demand low latency, high reliability, data privacy, and offline capability—such as autonomous vehicles, industrial monitoring, or medical devices.

What is TinyML?

TinyML (Tiny Machine Learning) is a subfield of machine learning focused on deploying lightweight AI models on ultra-low-power microcontrollers—devices that often have just a few kilobytes of memory. Despite these constraints, TinyML models can perform surprisingly sophisticated tasks like gesture recognition, keyword spotting, anomaly detection, or predictive maintenance.

It represents a powerful blend of embedded systems, ML algorithms, and efficient optimization techniques.

Why It Matters

1. Real-Time Intelligence

Edge devices can process data immediately as it is generated—essential in time-sensitive environments like healthcare monitoring or industrial automation.

2. Enhanced Privacy & Security

Since data doesn't need to be transmitted to the cloud, sensitive information stays local, reducing privacy risks.

3. Lower Bandwidth & Energy Consumption

By minimizing communication with central servers, Edge AI significantly reduces power and network usage—ideal for battery-operated and remote systems.

4. Scalability and Resilience

Local processing enables devices to function independently, even in low-connectivity environments, offering better scalability and robustness.

Applications in the Real World

- Smart Agriculture: Sensors equipped with TinyML can monitor soil conditions, crop health, and pest presence in remote fields with limited power.
- Wearables: Fitness bands and health monitors use edge AI to track activity, detect falls, or monitor heart rate variability in real-time.
- Smart Homes: Voice-controlled appliances and security cameras use edge processing for faster and more private user interaction.
- Industrial IoT (IIoT): Predictive maintenance systems on factory equipment detect early signs of mechanical failure, reducing downtime.

A New Frontier for Research and Education

For students and researchers, Edge AI and TinyML open exciting new pathways for innovation. From optimizing neural networks to designing energy-efficient hardware, this field offers rich opportunities to blend hardware, software, and machine learning.

Open-source tools such as TensorFlow Lite for Microcontrollers, Edge Impulse, and Arduino ML kits are making it easier than ever to prototype and deploy intelligent applications at the edge.

Looking Ahead

As we embrace the Internet of Things (IoT) and ubiquitous computing, Edge AI and TinyML will play a pivotal role in making our environments smarter, faster, and more secure. The challenge lies not only in developing compact models but also in rethinking how intelligence is distributed across devices and networks.

The future of AI isn't just in powerful cloud servers—it's also in the tiny, silent chips embedded all around us.

Let us, as educators and learners, explore this emerging frontier with curiosity and responsibility—preparing ourselves to shape a world where intelligence truly lives at the edge.

Neetha K Nataraj

Agentic AI: Your New Placement Training Partner

In today's competitive academic and professional landscape, students are expected to wear many hats. From acing semester exams to cracking coding rounds, writing compelling resumes, and preparing for technical interviews, the pressure to be "placement-ready" is intense. While placement cells and training programs offer support, many students still find themselves overwhelmed by the scale and complexity of preparation. This is where a new class of intelligent tools is beginning to make a significant difference — Agentic AI.

Agentic AI refers to autonomous, goal-directed AI systems that can plan, learn, adapt, and execute multi-step tasks with minimal human supervision. Unlike traditional chatbots or search engines that respond only when prompted, agentic systems can take initiative, retrieve relevant resources, adjust to feedback, and complete complex objectives — almost like having a personal assistant who never tires and always works in your best interest. These intelligent agents are not only transforming industries but are also beginning to redefine how students can approach placement preparation.

One of the most immediate and practical uses of agentic AI for college students is in the area of mock interview training. Preparing for interviews often involves going through generic questions or depending on a mentor's availability. With agentic AI, this process becomes more dynamic and personalized. By simply feeding in your resume and details of a job role you are targeting, an agentic AI tool can simulate a realistic interview environment. It asks context-specific questions based on your experience, evaluates your responses in real-time, and offers constructive feedback. Some systems are even capable of assessing tone, clarity, and confidence levels in spoken responses, helping students fine-tune their communication and technical articulation.

Beyond interviews, another area where students often struggle is resume building. It's no longer enough to just list your achievements and skills — resumes today need to be targeted, keyword-optimized, and aligned with job descriptions. Agentic AI can read a job posting, compare it with your resume, and point out gaps or mismatches. It can help rewrite bullet points for better impact, adjust formatting for readability, and ensure your resume is aligned with what applicant tracking systems (ATS) are programmed to detect. In essence, the AI acts as a resume reviewer and editor, available at any time.

But preparing for placements isn't only about refining one's profile. A large part of success comes from understanding the companies and roles students are applying to. This is where agentic AI's research capabilities truly shine. Say you have an interview coming up with a multinational IT company. Your AI assistant can scour the internet for you, compile the company's recent news, gather insights about its hiring trends, analyze employee reviews, and summarize all of it in a concise, digestible format. It might even go one step further — helping

you identify alumni from your college currently working in that company so you can network or gain insider tips.

These agents are also capable of identifying skill gaps and suggesting personalized learning pathways. Suppose your dream job requires proficiency in a specific tool or programming language you're unfamiliar with. An agentic AI can evaluate your current skill set, identify what you need to learn, and build a custom study plan using resources from platforms like NPTEL, Coursera, or edX. It can even integrate with tools like Notion or Trello to track your progress, revise the schedule if you fall behind, and motivate you to stay on course. It's like having your own AI-powered mentor, planner, and tutor rolled into one.

Another exciting application is in enhancing your professional presence online, especially on platforms like LinkedIn. Many students create a LinkedIn profile as a one-time activity, leaving it static and underutilized. Agentic AI can help you transform that into a dynamic professional identity. It can audit your profile and recommend changes that better reflect your achievements. It can generate attention-grabbing posts based on your internships, certifications, or projects. More importantly, it can help you reach out to recruiters and mentors with well-crafted, personalized messages — a crucial skill when you're aiming for off-campus placements.

For students who like to take a more hands-on approach, there are platforms that allow you to build your own agentic AI tools without deep coding knowledge. With systems like LangChain or Auto-GPT, you can create mini-agents that help automate your job search, remind you of deadlines, generate answers for HR questions, or even scrape job boards and notify you of relevant openings. This not only aids your own preparation but also demonstrates initiative and technical acumen — qualities that impress recruiters.

What makes agentic AI particularly appealing in the context of placement preparation is its flexibility. It doesn't replace human mentors or peer learning — it enhances them. For students who lack access to premium coaching or one-on-one mentorship, these tools can help level the playing field. For those who are already confident, it adds another layer of precision and speed. Whether you're a computer science student aiming for software roles, a business student preparing for analyst interviews, or an arts student exploring content or design roles, agentic AI has a use case tailored to your goals.

It's also worth noting that engaging with agentic AI can itself be a valuable talking point during interviews. As companies increasingly value adaptability and awareness of emerging technologies, being able to speak about how you used AI agents in your placement prep can give you an edge. It signals that you're not only tech-savvy but also proactive and self-driven — traits every employer looks for.

As with any powerful tool, the value of agentic AI lies in how you choose to use it. It's not about replacing effort but amplifying it with intelligence and strategy. As placement seasons become more competitive and expectations rise, having such a tool in your arsenal can make

a real difference. The future is not about man versus machine — it's about collaboration. And in that future, the smartest student may not be the one who works the hardest alone, but the one who works the smartest — with the right AI partner.

So, whether you're in your final year and applying for core jobs or just starting to build your placement foundation, don't overlook this emerging ally. Set up your first AI agent. Train it. Talk to it. Let it help you prepare, polish, and perform.

Your placement success might just be one intelligent agent away.

Parvathy Nair

The Rise of Agentic AI: Beyond ChatGPT

The digital landscape in 2025 is buzzing with a new paradigm in Artificial Intelligence: Agentic AI. While Large Language Models (LLMs) like ChatGPT have captivated the world with their ability to generate human-like text and creative content, Agentic AI represents a fundamental shift. It's not just about generating; it's about acting, planning, and learning autonomously to achieve complex goals. This blog post will dive deep into what Agentic AI truly is, how it differs from its predecessors, and why it's poised to reshape our businesses and daily lives.

For years, Artificial Intelligence has been on a remarkable journey. We started with Reactive AI, systems designed to respond to specific inputs with predefined actions. Think of a simple chatbot that answers frequently asked questions based on a script, or a spam filter that identifies suspicious emails based on a set of rules. These systems are fast and efficient within their narrow domains, but they lack the ability to adapt, learn, or operate beyond their programmed responses.

Then came the age of Generative AI, epitomized by tools like ChatGPT, Midjourney, and Stable Diffusion. These models, powered by vast datasets and sophisticated neural networks, revolutionized content creation. They can generate coherent articles, compelling marketing copy, stunning images, and even functional code in response to a user's prompt. Generative AI is incredibly powerful for creation and synthesis, transforming how we interact with information and produce digital assets. However, even these advanced systems are primarily reactive to prompts. They don't inherently possess a goal, plan a multi-step process, or learn from the outcomes of their actions without explicit human direction. They are brilliant at generating, but they don't do in the autonomous sense.

Enter Agentic AI. This is the next frontier, representing a significant leap forward. Agentic AI refers to AI systems that possess agency – the capacity to act independently, make decisions, and pursue goals without continuous human intervention. Unlike their predecessors, agentic AI systems are designed to:

- Plan: They can break down a high-level objective into a series of smaller, manageable tasks.
- Act: They can execute these tasks, interacting with various tools, systems, and environments.
- Learn: Crucially, they can observe the outcomes of their actions, learn from successes and failures, and adapt their strategies to improve performance over time.

Think of it as the difference between a highly skilled artisan (Generative AI) who crafts beautiful pieces on demand, and a self-sufficient entrepreneur (Agentic AI) who identifies a market need, designs a product, manages the entire production process, and continuously refines their business strategy based on customer feedback and market shifts. Agentic AI is about taking initiative and demonstrating intelligent, goal-driven behavior.

The Core Mechanics: Plan, Act, Learn

The "Plan, Act, Learn" loop is the fundamental engine driving Agentic AI. Let's break down each component:

1. Plan:

At the heart of an agentic AI system is its ability to formulate a plan. When given a high-level goal, the AI doesn't just immediately try to solve it. Instead, it engages in a process of reasoning and decomposition:

- Goal Interpretation: The AI first interprets the given goal, understanding its nuances and potential sub-objectives.
- Task Decomposition: It then breaks down this overarching goal into a series of smaller, sequential, or parallel tasks. This is akin to a human project manager creating a detailed project plan.
- Strategy Formulation: For each task, the AI devises a strategy, considering available tools, resources, and potential obstacles. It might even simulate different approaches to determine the most efficient path.
- Pre-computation/Knowledge Retrieval: Before acting, the agent may leverage its knowledge base or external information (e.g., through web searches) to refine its plan and gather necessary context.

For instance, if the goal is "Organize a company offsite in Goa for 50 employees by September," a traditional AI might offer a list of venues. An agentic AI, however, would plan to:

1.Research suitable dates and venues in Goa.
2.Check employee availability.
3.Negotiate rates with venues.
4.Arrange transportation and accommodation.
5.Develop a schedule of activities.

2. Act:

Once a plan is formulated, the agentic AI moves into the execution phase. This is where it actively interacts with its environment, which could be digital (e.g., software applications, databases, APIs) or even physical (e.g., robotics in a factory).

- Tool Utilization: Agentic AI systems are often equipped with a suite of "tools" – these are interfaces to external services or capabilities. For the Goa offsite example, these tools might include an email client to send invitations, a booking system for hotels, a calendar API to check availability, or even a payment gateway.
- Execution of Tasks: The AI executes each step of its plan, dynamically choosing and using the appropriate tools. It can log into systems, extract information, fill out forms, send communications, and initiate processes – all autonomously.
- Monitoring and Observation: As it acts, the AI continuously monitors the environment for feedback. Did an email send successfully? Did a booking go through? Is there new information that might impact the plan?

This active engagement sets it apart from generative models that simply output text or images. Agentic AI does things in the real or digital world.

3. Learn:
The "Learn" component is what truly elevates Agentic AI beyond static systems. It's the mechanism for continuous improvement and adaptability.

- Feedback Integration: After executing a task or a series of tasks, the agent processes the outcomes. Was the goal achieved? Were there any errors or unexpected results? This feedback can come from direct observation, system logs, or even human input.
- Performance Evaluation: The AI evaluates its performance against the initial plan and the desired outcome.
- Adaptation and Refinement: Based on this evaluation, the agent modifies its internal models, strategies, or even its understanding of the problem. If a particular tool consistently fails, it might learn to prioritize alternatives. If a planning strategy leads to inefficiencies, it will adapt for future attempts. This continuous learning enables agentic AI to become more effective and robust over time, handling unforeseen circumstances and evolving challenges.

This iterative loop of planning, acting, and learning allows Agentic AI to tackle complex, multi-step problems, making it a highly dynamic and powerful form of artificial intelligence.

Differentiating Agentic AI from Generative AI (Beyond the Hype)

While both Agentic AI and Generative AI leverage advanced machine learning techniques, particularly Large Language Models (LLMs), their fundamental purpose and mode of operation diverge significantly. Understanding this distinction is crucial to grasping the true impact of Agentic AI.

Generative AI (e.g., ChatGPT, Midjourney): The Creator

- Primary Function: To generate new content based on learned patterns from vast datasets. This content can be text, images, audio, code, or even video.
- Mode of Operation: Primarily a "request-response" system. You give it a prompt, and it provides an output. It reacts to your input.
- Goal Orientation: The "goal" is typically defined by the prompt itself. The AI doesn't independently conceptualize a long-term objective; it fulfills the immediate request.
- Autonomy: Limited. While it can produce complex outputs, it doesn't independently initiate actions, interact with external systems, or learn from the real-world consequences of its output. A user still has to copy-paste, integrate, and act on the generated content.
- Examples:
  - Writing an essay based on a topic.
  - Creating an image from a text description.
  - Summarizing a long document.
  - Drafting an email.

Agentic AI: The Doer & The Manager

- Primary Function: To autonomously achieve a defined goal by planning a sequence of actions, executing them, and learning from the outcomes.
- Mode of Operation: Proactive and iterative. It perceives its environment, makes decisions, takes actions, and continuously refines its approach. It's an active participant in a workflow.
- Goal Orientation: Possesses an intrinsic understanding of a higher-level goal and works towards it over an extended period, often involving multiple steps and interactions.
- Autonomy: High. It can operate with minimal human oversight, adapting to dynamic situations and unexpected challenges. It can integrate with various tools and systems to perform tasks.
- Examples:

- An AI agent managing a customer support ticket from initial query to resolution, involving multiple systems, data lookups, and communication with the customer.
- An AI agent optimizing a logistics chain by autonomously re-routing shipments based on real-time traffic and weather conditions.
- An AI agent managing a sales pipeline, identifying leads, sending personalized outreach, scheduling meetings, and updating the CRM.

The Synergistic Relationship:

- It's important to note that Agentic AI doesn't replace Generative AI; it often leverages it. An agentic AI system might use a generative AI model as a "tool" within its action phase. For example:
- An agentic AI managing a marketing campaign might use a generative AI to create personalized ad copy or email drafts.
- An agentic AI for research might use a generative AI to summarize large volumes of research papers it has retrieved.
- In essence, while Generative AI is like the brilliant artist, Agentic AI is the strategic orchestrator, the intelligent supervisor, or the proactive problem-solver that uses all available resources, including generative capabilities, to achieve a defined objective. This distinction marks a critical evolution in AI's practical application, moving from content generation to autonomous action and workflow automation.

The Transformative Power: Real-World Scenarios in 2025

- The advent of Agentic AI is not just a theoretical concept; it's already beginning to manifest in tangible ways, promising to revolutionize various sectors. In 2025, we're seeing the foundational elements of these "digital workers" reshape how businesses operate and how individuals interact with technology.

1. Hyper-Personalized Customer Experiences:
Imagine a customer service interaction where an AI agent doesn't just answer your questions but actively anticipates your needs. An agentic AI can monitor your product usage, purchase history, and even sentiment in previous interactions. If you've had a recent issue, it might proactively offer a solution, suggest relevant products, or even schedule a follow-up call, all without direct human prompting. It can resolve complex queries by pulling data from multiple internal systems (CRM, inventory, knowledge base) and executing necessary actions like issuing refunds or processing returns.

2. Autonomous Business Operations:
For enterprises, Agentic AI promises unparalleled efficiency.

- Supply Chain Optimization: AI agents can monitor global supply chains in real-time, detecting potential disruptions (e.g., weather events, geopolitical issues), and autonomously rerouting shipments, renegotiating contracts with alternative suppliers, or adjusting production schedules.
- Financial Operations: Beyond basic accounting, agentic AI can manage invoice reconciliation, flag anomalous transactions for fraud detection, optimize cash flow by predicting expenditure, and even execute automated trading strategies based on market analysis.
- HR and Onboarding: AI agents can manage the entire employee lifecycle, from screening resumes and scheduling interviews to automating onboarding tasks like setting up accounts, assigning training modules, and answering new hire questions, freeing up HR professionals for more strategic roles.

3. Next-Generation Personal Assistants:
Move beyond simple voice commands. Your future personal AI assistant won't just tell you the weather; it will understand your daily routine, anticipate your needs, and proactively manage your life.

- "Your calendar looks busy tomorrow, I've already re-routed your morning commute to avoid traffic and ordered your usual coffee to be ready when you arrive at the office."
- "Based on your recent purchases and preferences, I've curated a personalized meal plan for the week and added the groceries to your online cart." These agents will seamlessly integrate with your smart home, connected devices, and digital services, creating a truly intelligent and anticipatory experience.

4. Enhanced IT Management and Cybersecurity:
In the complex world of IT, agentic AI can act as a proactive digital workforce.

- Automated Troubleshooting: AI agents can detect system anomalies, diagnose issues, and autonomously initiate fixes or escalate to human technicians with detailed diagnostic reports.
- Proactive Cybersecurity: AI agents can continuously monitor network traffic for threats, identify vulnerabilities, and automatically deploy patches or isolate compromised systems, significantly reducing response times to cyberattacks.

- Resource Optimization: Managing cloud resources, ensuring optimal performance, and scaling infrastructure based on demand can be handled by agentic AI, leading to significant cost savings and improved reliability.

These examples are just the tip of the iceberg. As Agentic AI matures, its ability to understand context, reason, and act across diverse digital environments will unlock a new era of automation and intelligent decision-making, promising to reshape not just our businesses but also the very fabric of our daily lives.

Challenges, Ethics, and Preparing for the Agentic Future

While the potential of Agentic AI is immense, its rise also brings forth significant challenges and critical ethical considerations that we must address proactively.

Challenges on the Road to Widespread Adoption:

- Data Quality and Availability: Agentic AI, like all AI, relies on vast amounts of high-quality data for training and operation. Ensuring data privacy, security, and integrity, especially across disparate systems, remains a significant hurdle.
- Integration Complexity: For agentic AI to truly flourish, it needs seamless integration with existing enterprise systems, legacy software, and diverse APIs. This can be a complex and time-consuming undertaking.
- Trust and Transparency (The "Black Box" Problem): As AI agents make autonomous decisions, understanding how they arrived at those decisions can be difficult. This "black box" problem poses challenges for debugging, auditing, and ensuring accountability, especially in sensitive domains like finance or healthcare.
- Human-in-the-Loop Design: While autonomous, most critical agentic AI applications will require human oversight and intervention, particularly in novel or high-stakes situations. Designing effective human-AI collaboration models is crucial.
- Talent Gap: The demand for professionals skilled in designing, deploying, and managing agentic AI systems (AI architects, prompt engineers for autonomous systems, AI governance specialists) is rapidly growing, creating a significant talent shortage.

Ethical Imperatives:

As AI gains more autonomy, the ethical stakes skyrocket.

- Bias and Fairness: If training data contains biases, the agentic AI will learn and perpetuate those biases in its decisions and actions, leading to unfair or discriminatory outcomes. Rigorous testing and bias detection mechanisms are paramount.
- Accountability: When an autonomous AI makes an error, who is responsible? Is it the developer, the deployer, or the user? Clear frameworks for accountability and liability are urgently needed.
- Security and Malicious Use: An autonomous AI with agency could potentially be repurposed for malicious activities if compromised. Robust security measures and ethical guardrails are essential.

- Job Displacement and Reskilling: While agentic AI will create new jobs, it will undoubtedly automate many existing tasks, leading to job displacement in certain sectors. Proactive reskilling and upskilling initiatives are vital to ensure a just transition for the workforce.

Preparing for the Agentic Future:

For businesses and IT professionals in Thrissur and beyond, embracing the agentic future means:

1. Invest in Data Foundations: Prioritize clean, well-governed, and secure data infrastructure. This is the fuel for agentic AI.
2. Pilot Projects with Clear ROI: Start with well-defined, contained use cases where agentic AI can demonstrate tangible business value, building confidence and learning.
3. Foster a Culture of AI Literacy: Educate employees across all levels about AI, its capabilities, and its limitations. Promote collaboration between human and AI agents.
4. Prioritize Ethical AI Development: Implement ethical AI principles from the design phase. Develop robust governance frameworks, conduct regular audits, and ensure transparency where possible.
5. Upskill Your Workforce: Invest in training for your IT teams in areas like AI architecture, prompt engineering for autonomous agents, MLOps, and ethical AI practices. Focus on skills that complement AI, such as critical thinking, creativity, and complex problem-solving.

The rise of Agentic AI marks a pivotal moment in the evolution of technology. By understanding its core principles, acknowledging its transformative power, and proactively addressing its challenges and ethical implications, we can harness its potential to build a more efficient, innovative, and intelligent future. The era of the "digital doer" is here, and those who embrace it with foresight and responsibility will lead the way.

Sanjay Gireesan
2020-24 CSE B

PLACEMENTS

JULY 2025

The college successfully organized a comprehensive placement training program from July 2nd to July 18th for the final year students of all departments. The training was aimed at enhancing the employability skills of students and preparing them to face campus recruitment processes with confidence.

A key feature of this year's training was the structured batch-wise approach based on student performance in an assessment test conducted on June 30th. Based on the results, students were divided into two groups — the advanced batch for those who scored in the higher slab, and the basic batch for the remaining students. This allowed trainers to tailor the sessions according to the learning pace and needs of each group.

The Computer Science and Engineering (CSE) department students actively participated in the program, which focused on three core areas: aptitude training, competitive coding, and soft skills.

- Aptitude training included modules on quantitative aptitude, logical reasoning, and verbal ability — essential components of most campus placement tests.
- The competitive coding sessions were specifically designed for CSE students to strengthen their programming and problem-solving abilities. Students were trained on platforms like HackerRank and LeetCode, and introduced to coding patterns commonly seen in technical rounds.
- The soft skills training aimed to improve communication skills, teamwork, interview etiquette, and confidence. Sessions included mock interviews, group discussions, and interactive activities to build professional presence.

The sessions were conducted by experienced trainers from Pragmatic and Know-Up, both well-regarded in the field of placement preparation. The training received positive feedback from students, with many appreciating the focused, practical approach and personalized learning environment.

Overall, the placement training program provided a solid foundation for students, especially those from the CSE department, to approach the placement season with improved skills and confidence.

CREDITS & CONNECTIONS

JULY 2025

FOLLOW US ON OUR SOCIALS:

CONTACT US:
newslettercse@adishankara.ac.in

EDITORIAL BOARD

CHIEF EDITOR : DR. RAMANI BAI V (Professor & Head - CSE)

EDITORS : PROF.ANILA S, PROF. KRISHNAPRIYA R

CREATIVE DESIGN : NANDANA SUDHIR VARMA (S3 CSE) , VIGNESH ANUP (S3 CSE)

CONTENT TEAM : CATHERINE NIXON (S5 CSE-B), GLORIYA TITTO (S7 CSE-B), SANA FATHIMA (S5 CSE-C), SANJANA (S5 CSE-C)