

Sakshin

Monthly Newsletter of Dept. of CSE

2026

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.

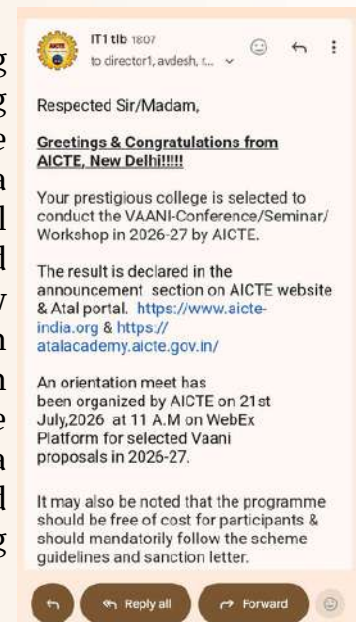
Aakashien 2026 – Silver Jubilee Alumni Meet



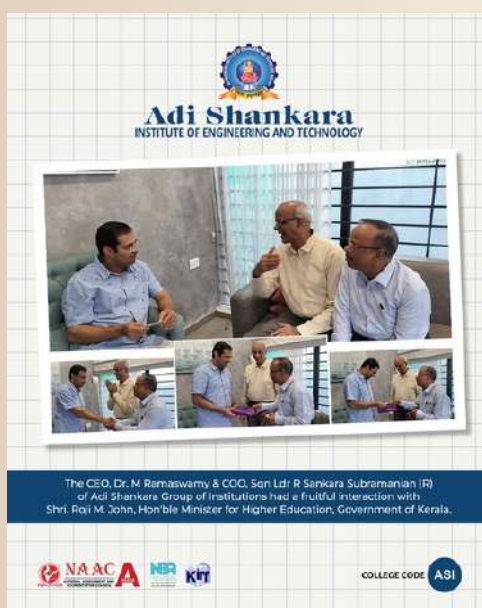
The Adi Shankara Institute of Engineering & Technology Alumni Association (AAKASHIEN) successfully organized Aakashien 2026, the Silver Jubilee Alumni Meet, commemorating 25 years of alumni excellence. The formal inaugural session was held on 4 July 2026 at the ASIET Auditorium from 2:00 PM to 4:00 PM, followed by high tea. The celebrations continued with an Alumni Reunion, Cultural Evening, and Grand Dinner at Flora Airport Hotel, Nedumbassery, from 5:00 PM to 9:30 PM. The event brought together alumni from various graduating batches, providing a platform to reconnect with classmates, rekindle cherished memories, and celebrate the enduring bond between the institution and its alumni community.

AICTE VAANI Grant Awarded for National Conference

The Department of Computer Science and Engineering (CSE), ASIET achieved a significant milestone by securing the prestigious AICTE VAANI Funding Grant for the academic year 2026-27. The grant was awarded to organize a National Conference on "Advanced Computational Intelligence for Malayalam Language Processing – Social and Economic Perspectives." This recognition by AICTE, New Delhi, reflects the department's growing excellence in research and innovation while promoting advancements in computational intelligence and regional language technologies. The conference is expected to provide a valuable platform for researchers, academicians, and industry experts to share knowledge and explore emerging developments in Malayalam language processing.



Interaction with the Hon'ble Minister for Higher Education



The CEO of the Adi Shankara Group of Institutions, Dr. M. Ramaswamy, and the COO, Sqn Ldr R. Sankara Subramanian (R), held a fruitful interaction with Shri Roji M. John, Hon'ble Minister for Higher Education, Government of Kerala. The meeting focused on key aspects of higher education, institutional development, and opportunities to further strengthen the quality of engineering education. The interaction reflected ASIET's continued commitment to building meaningful collaborations with academic leaders and policymakers, reinforcing its vision of academic excellence, innovation, and the holistic development of higher education.

Ramayana Month Observance



Adi Shankara Institute of Engineering & Technology observed Ramayana Month with devotion and reverence, encouraging students, faculty, and staff to reflect on the timeless values and teachings of the *Ramayana*. The observance promoted spiritual awareness, moral values, and cultural heritage while inspiring the academic community to embrace the ideals of righteousness, compassion, and self-discipline exemplified in the epic. The initiative served as a meaningful reminder of the enduring relevance of India's rich literary and cultural traditions in shaping responsible individuals and a value-based society.

Hindustan Scouts & Guides – Investiture Ceremony



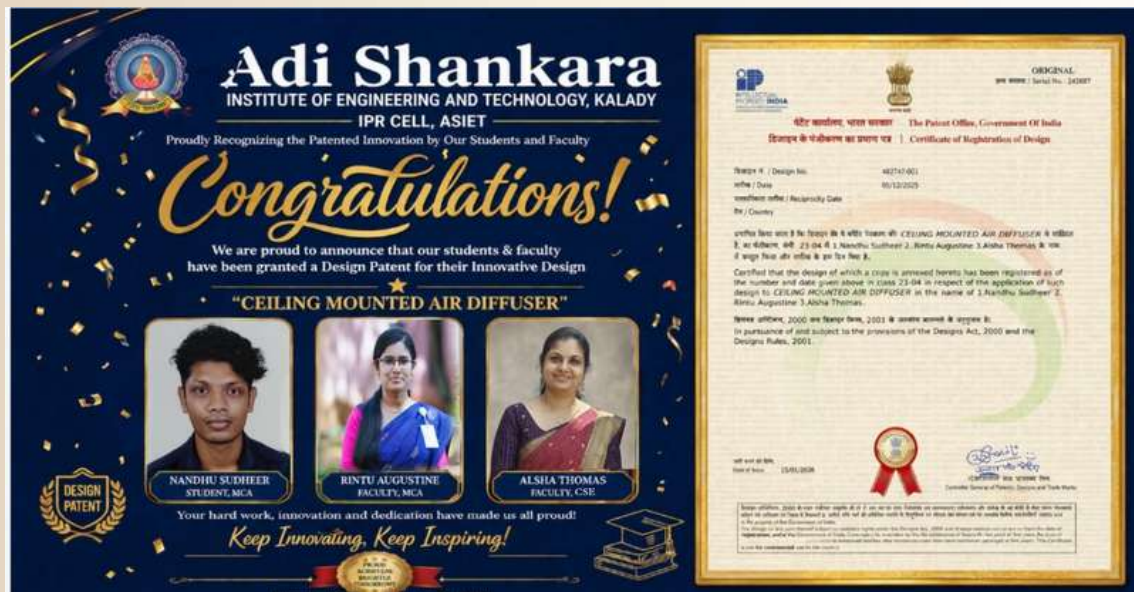
The Hindustan Scouts & Guides Unit, ASIET, successfully conducted the Investiture Ceremony of the Rovers & Rangers on the auspicious occasion of Guru Purnima. During the ceremony, the newly inducted members received their first Diksha, marking the beginning of their journey of service, leadership, discipline, and commitment to the ideals of Scouting and Guiding. The ceremony symbolized the members' pledge to uphold the Scout Promise and Law, inspiring them to serve society with dedication, responsibility, and pride.

BALLENZA – Football Fiesta 2026



The ASIET Student Council organized BALLENZA – Football Fiesta, a vibrant 7's Shootout Competition inspired by the spirit of the FIFA World Cup 2026, on 18 July 2026 at the College Ground from 2:00 PM to 4:00 PM. As part of the celebrations, students enthusiastically participated in Jersey Day, wearing their favorite football jerseys and adding to the festive atmosphere. The event witnessed active participation from students, who showcased their sporting skills, teamwork, and competitive spirit, while spectators cheered enthusiastically from the sidelines. BALLENZA successfully celebrated the excitement of football and promoted sportsmanship, unity, and campus camaraderie.

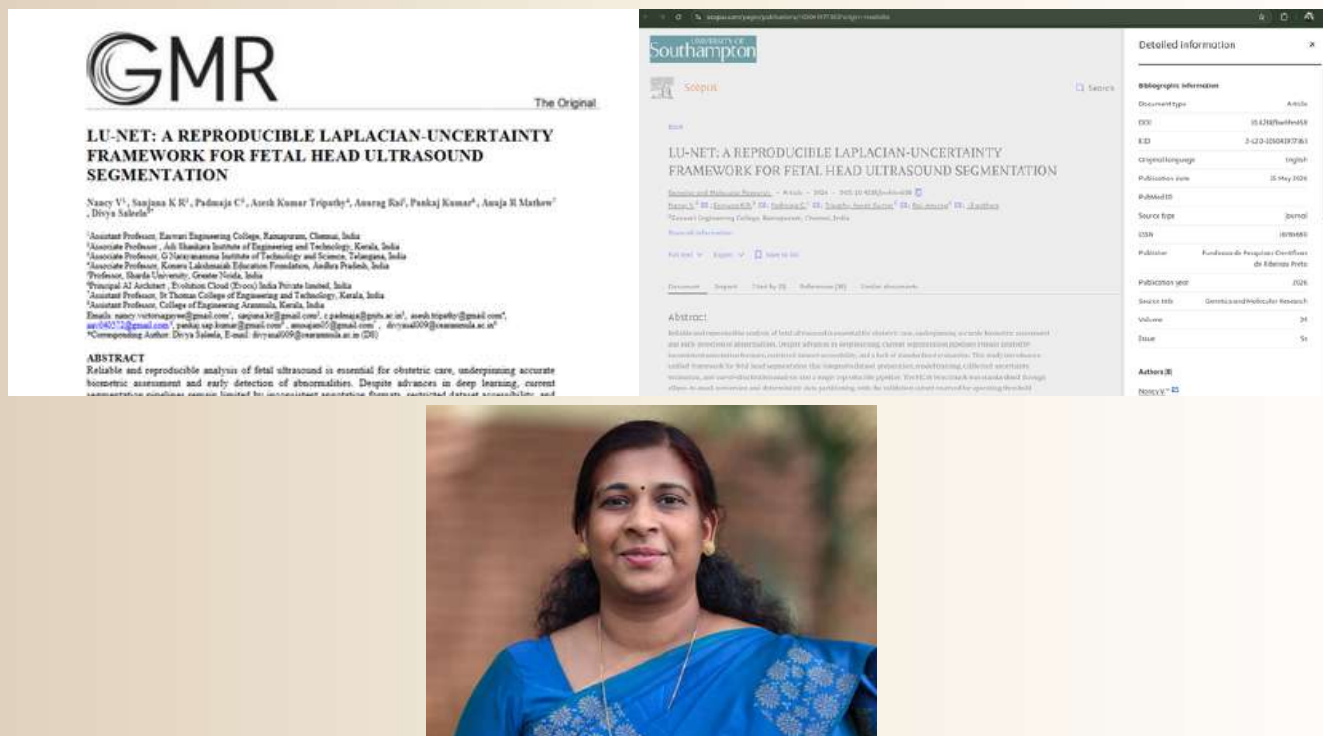
IPR Achievement – Indian Design Patent Registration



The IPR Cell, Adi Shankara Institute of Engineering and Technology (ASIET) congratulates Ms. Alsha Thomas (Faculty, CSE), along with Mr. Nandhu Sudheer (Student, MCA) and Ms. Rintu Augustine (Faculty, MCA), on the successful registration of their Indian Design Patent for the innovative "Ceiling Mounted Air Diffuser."

The patented design is the result of entirely in-house research, creativity, and development at ASIET, showcasing the team's original thinking, technical expertise, and commitment to innovation. This achievement reflects ASIET's strong research culture and its continued focus on fostering intellectual property creation and interdisciplinary collaboration, further strengthening the institution's contributions to innovation and technological advancement.

Research Publication in a Scopus-Indexed International Journal



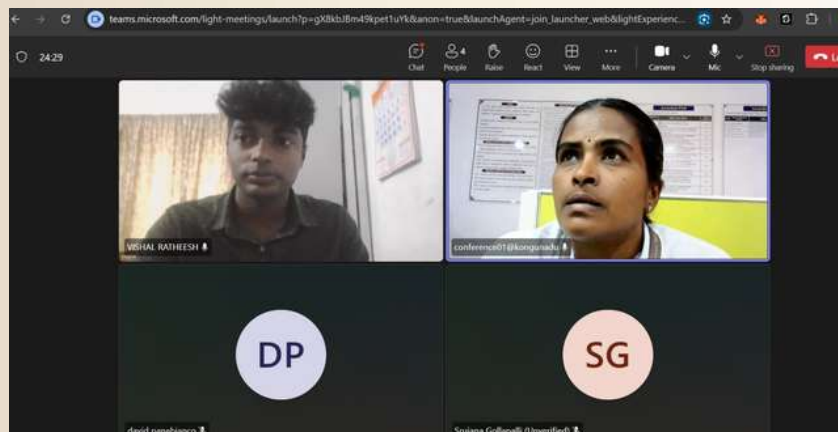
Dr. Sanjuna K. R., Associate Professor, Department of Computer Science and Engineering, published a research paper titled "LU-NET: A Reproducible Laplacian-Uncertainty Framework for Fetal Head Ultrasound Segmentation" in Genetics and Molecular Research (GMR), a Scopus-indexed international journal. The research presented a unified and reproducible framework for fetal head ultrasound segmentation by integrating dataset preparation, model training, uncertainty estimation, and out-of-distribution analysis into a single pipeline. The proposed LU-Net model achieved a mean Dice score of 0.9716 and a mean IoU of 0.9454, demonstrating high segmentation accuracy, precise boundary detection, and reliable confidence estimation. This publication highlights the department's continued contributions to cutting-edge research in medical image analysis and artificial intelligence, while reinforcing ASIET's commitment to academic excellence and impactful research.

Research Paper Presentation at IEEE ICNCCom 2026



Heartiest congratulations to Ms. Shany Jophin, Mr. Jerin Varghese, and Ms. Naznin M. Ali, Assistant Professors, Department of Computer Science and Engineering, ASIET, along with Vishal Ratheesh, Vishnu Prasad, and Sanjay S (S8 CSE C, 2022–2026), on presenting their research paper, "An LLM-Powered Agentic Orchestration System for Automated Cross-Tool Ticket Management in Enterprise Environments," at the IEEE International Conference on Networks, Computers and Communications (ICNCCom 2026), organized by Kongunadu College of Engineering and Technology (KNCET), Tamil Nadu, India.

The presentation highlights the Department of Computer Science and Engineering's continued commitment to quality research and innovation in artificial intelligence and enterprise automation.



Faculty Member Participated in FDP on Academic Writing and Research Ethics



Ms. Sharika T R, Assistant Professor, Department of Computer Science and Engineering, Adi Shankara Institute of Engineering and Technology, participated in the One-Day Faculty Development Program on "Academic Writing and Research Ethics" organized by Inkvyom Publishers on 29 June 2026. The programme focused on effective academic writing, research publication strategies, plagiarism awareness, ethical research practices, and responsible scholarly communication. Her participation reflected a strong commitment to academic integrity, research excellence, and continuous professional development, further strengthening the department's focus on quality teaching and research.

Certificate of Excellence in Reviewing



Dr. Suji Pramila R, faculty member of the Department of Computer Science and Engineering, ASIET, was awarded the Certificate of Excellence in Reviewing by the Asian Journal of Research in Computer Science in July 2026. The recognition was conferred in appreciation of her outstanding contribution to maintaining the quality of the journal through her dedicated peer-review efforts. This achievement reflects her commitment to academic excellence, research integrity, and scholarly contributions to the scientific community.

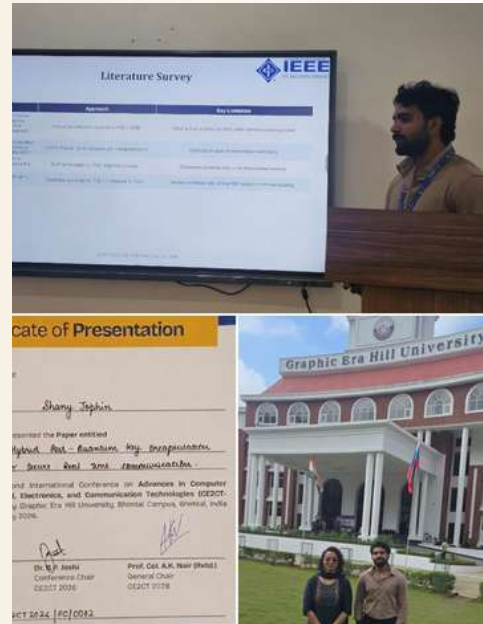
Faculty Achievement in Research Reviewing



Dr. Sharika T. R., Faculty of the Department of Computer Science and Engineering, was awarded the Certificate of Reviewing by the International Research Journal of Multidisciplinary Technovation (IRJMT) in June 2026. The recognition was conferred in appreciation of successfully completing two peer reviews for the journal. This achievement reflected her commitment to academic excellence, research quality, and scholarly service, while bringing recognition to the Department of Computer Science and Engineering through her valuable contribution to the research community.

Research Paper Presented at IEEE CE2CT 2026

Ms. Shany Jophin and Mr. Jerin Varghese, (Assistant Professors), along with Paul Eldhose, Rishikesh K. S., Roshan O. S., and Sai Asok (S8 CSE C, 2022-2026 Batch), successfully presented their research paper titled "A Unified Hybrid Post-Quantum Key Encapsulation Mechanism for Secure Real-Time Communication" at the IEEE 2026 Second International Conference on Advances in Computer Science, Electrical, Electronics, and Communication Technologies (CE2CT 2026). The conference was organized by Graphic Era Hill University, Uttarakhand, and the paper was presented on 4 July 2026. This accomplishment reflected the department's active engagement in advanced research and its continued contribution to emerging technologies in secure communication.



Faculty Development Programme on Claude AI



Adi Shankara
INSTITUTE OF ENGINEERING AND TECHNOLOGY

NAAC A NEA 4.0

INTEGRATING CLAUDE INTO ACADEMIC WORKFLOWS: A PRACTICAL APPROACH

Claude
Your AI collaborator for smarter teaching, research and academic excellence.

TEACHING SUPPORT
DATA ANALYSIS
RESEARCH ASSISTANCE
CONTENT CREATION
ASSESSMENT & FEEDBACK

RESOURCE PERSON
MR. ANJUSH R K
ASSISTANT PROFESSOR DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ADI SHANKARA INSTITUTE OF ENGINEERING AND TECHNOLOGY

10 JULY 2026
FRIDAY 1:00 PM – 2:00 PM
CSE SEMINAR HALL

Let's work smarter with Claude

Empowering academics with responsible AI

ORGANIZED BY
DQAC, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

The Department of Computer Science and Engineering, ASIET, organized a Faculty Development Programme on "Integrating Claude into Academic Workflows: A Practical Approach" to enhance the effective use of AI in teaching, research, and academic activities. The session was led by Mr. Anjush R. K., Assistant Professor, Department of CSE, ASIET, who demonstrated practical applications of Claude for content creation, academic writing, research support, and workflow automation. Faculty members actively participated in the interactive session, gaining valuable insights into integrating AI tools into their daily academic practices and improving productivity through responsible AI adoption.

CSE Faculty Members Served as Resource Persons for Add-on Course



Ms. Parvathy Nair and Ms. Akshaya Jayaraj, Assistant Professors from the Department of Computer Science and Engineering, served as resource persons for the five-day Add-on Certificate Course on Advanced Biomedical Signal Processing and Medical Electronics using Python, organized by the Department of Electronics & Biomedical Engineering in association with EBSSA and BMESI from 6–10 July 2026. Conducted for S5 Electronics & Biomedical Engineering students, the programme focused on Biomedical Signal Analysis, Medical Electronics, and AI-based Healthcare Applications through hands-on training using Python.

The CSE faculty members delivered sessions that equipped participants with practical programming skills and insights into the application of Python in biomedical signal processing and intelligent healthcare systems. They were joined by Dr. Surya D and Ms. Winnie Ann Thomas from the Department of Electronics & Biomedical Engineering, while Dr. Tresa Joseph served as the Faculty Coordinator. The programme successfully fostered interdisciplinary learning by combining expertise from Computer Science and Biomedical Engineering, enabling students to gain valuable exposure to emerging healthcare technologies.

CSE Student Secures Admission to IIT Palakkad



The Department of Computer Science and Engineering congratulated Ben George of the CSE 2022–26 batch on securing admission to the MS (By Research) in Data Science programme at IIT Palakkad. This remarkable achievement reflected his academic excellence, dedication, and passion for research. The department extended its best wishes for his future endeavours and expressed confidence that he would continue to excel in his academic and professional journey while inspiring fellow students.

Designing Success at AURA 4.0



Hrithika E. B.(S7,CSE-B),, secured Second Position in DesignHer, a five-day UI/UX Design Bootcamp and Competition conducted as part of AURA 4.0 by the IEEE Women in Engineering Affinity Group, IEEE SCT SB. Her outstanding performance showcased creativity, design thinking, and problem-solving abilities developed through the intensive bootcamp. This achievement reflected her dedication to user-centric design and brought recognition to the Department of Computer Science and Engineering by demonstrating the talent and innovation of its students.

Students Successfully Completed ACM Summer School on Edge AI and Robotics

Bhadra A. Nair (S5 CSE B), Sanjana Elizabeth K. V. (S7 CSE C), and Nimal K. G. (S7 CSE C) successfully completed the ACM Summer School on Edge AI and Robotics held at the Indian Institute of Science (IISc), Bangalore, from 6–13 July 2026. The intensive programme provided participants with hands-on training in Edge AI, Robotics, TinyML, Computer Vision, and Embedded Intelligence, enabling them to enhance their technical knowledge and practical skills in emerging technologies. Their successful completion of the programme reflected their commitment to continuous learning, innovation, and technical excellence, bringing pride to the Department of Computer Science and Engineering.



ASIET Team Presented Research Paper at IEEE ICTEST 2026



Ms. Krishna Priya R., Assistant Professor, Department of Computer Science and Engineering, ASIET, along with Mr. Anandhakrishnan P. S., Ms. Aneeta Paul, Ms. Anu Babu, and Ms. Aleena Jameson, S8 A pass-out students, successfully presented their conference paper titled "Disaster Victim Identification System" at the 3rd IEEE International Conference on Trends in Engineering Systems and Technologies (ICTEST 2026), held from 16–18 July 2026 at Hotel Renai, Palarivattom, Kochi. The research was carried out under the guidance of Ms. Krishna Priya R. and highlighted the department's commitment to collaborative research, innovation, and academic excellence. The achievement marked a significant milestone for both the faculty and the graduating students, bringing recognition to the Department of Computer Science and Engineering, ASIET.

STUDENT ACHIEVEMENTS

JULY 2026

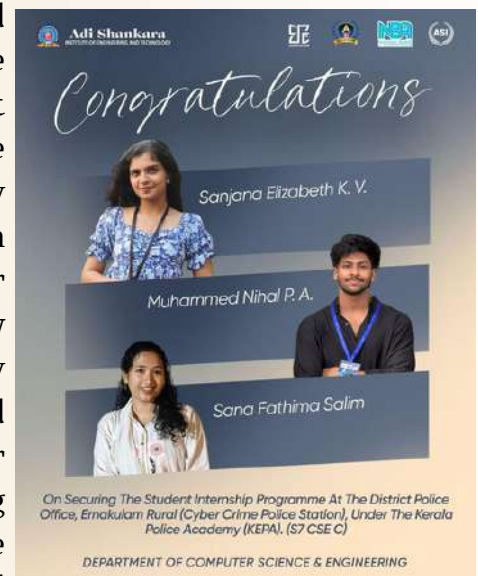
S3 CSE B Students Excelled in Ramayana Quiz



Lakshmi Priya and Meenu of S3 CSE B secured the First Prize, while Devi Kripa and Malavika, also from S3 CSE B, won the Second Prize in the Ramayana Quiz conducted at Adi Shankara Institute of Engineering and Technology on 24 July 2026. Organized by the Indian Knowledge Systems (IKS) Cell in association with the Literary Club and Internal Quality Assurance Cell (IQAC), the competition celebrated the values and teachings of the *Ramayana*. The outstanding performance of the S3 CSE B students reflected their knowledge, dedication, and enthusiasm, bringing pride to the Department of Computer Science and Engineering.

Students Secured Cyber Crime Internship under Kerala Police Academy

Sanjana Elizabeth K. V., Muhammed Nihal P. A., and Sana Fathima Salim of S7 CSE C secured the Student Internship Programme at the District Police Office, Ernakulam Rural (Cyber Crime Police Station) under the Kerala Police Academy (KEPA). The internship provided the students with an opportunity to gain practical exposure to cyber crime investigation, digital security, and law enforcement practices, enabling them to apply their technical knowledge in a real-world environment. Their achievement reflected their academic excellence and commitment to exploring emerging domains in cybersecurity, bringing pride to the Department of Computer Science and Engineering.



Outstanding Performance in S6 KTU B.Tech Degree Examinations



The Department of Computer Science & Engineering celebrated the outstanding academic performance of its students in the S6 KTU B.Tech Degree Examinations. A total of 43 students secured an SGPA of 8.00 and above, showcasing the department's strong academic culture and the students' dedication to excellence. Among them, Sanjana Elizabeth K V emerged as the top scorer with an SGPA of 9.35, followed by Hima Paul (9.17), Ajanna C U (9.15), and Ajith J (9.00). In addition, 16 students secured an SGPA between 8.50 and 8.99, while 23 students achieved an SGPA between 8.00 and 8.49, reflecting consistent academic excellence across the department. The department congratulated all the achievers for their remarkable performance and wished them continued success in their future academic and professional endeavors.

Build-A-Project 14: Project Expo



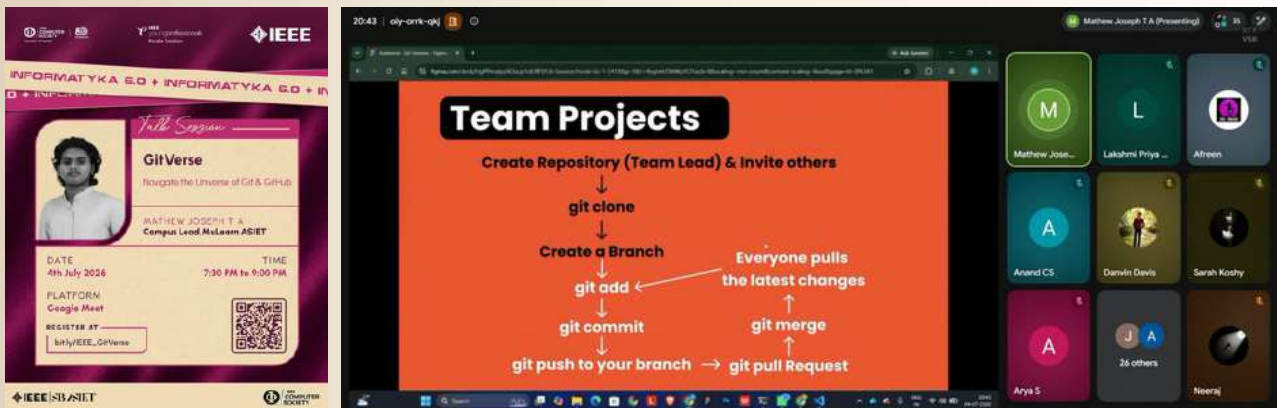
On 17 July 2026, the IEEE Computer Society Student Branch Chapter, ASIET, organized the Project Expo, the concluding event of Build-A-Project 14, a 14-day semester break innovation challenge themed "Technology for Real-World Impact." Held at the CSE Seminar Hall from 2:00 PM to 4:00 PM, the expo provided participants with an opportunity to showcase the innovative projects they had developed individually or in teams during the challenge.

Participants presented their solutions by explaining the real-world problems they addressed, the approaches they adopted, and the technologies used to build their

projects. The presentations demonstrated creativity, technical competence, and practical problem-solving skills, reflecting the outcomes of the intensive innovation challenge. The projects were evaluated by Ms. Sharika T. R and Ms. Naznin, who assessed them based on creativity, technical implementation, and real-world relevance before selecting the best projects. The expo marked a successful conclusion to Build-A-Project 14, celebrating innovation, collaboration, and the application of technology to address real-world challenges.



GitVerse: Navigate the Universe of Git & GitHub



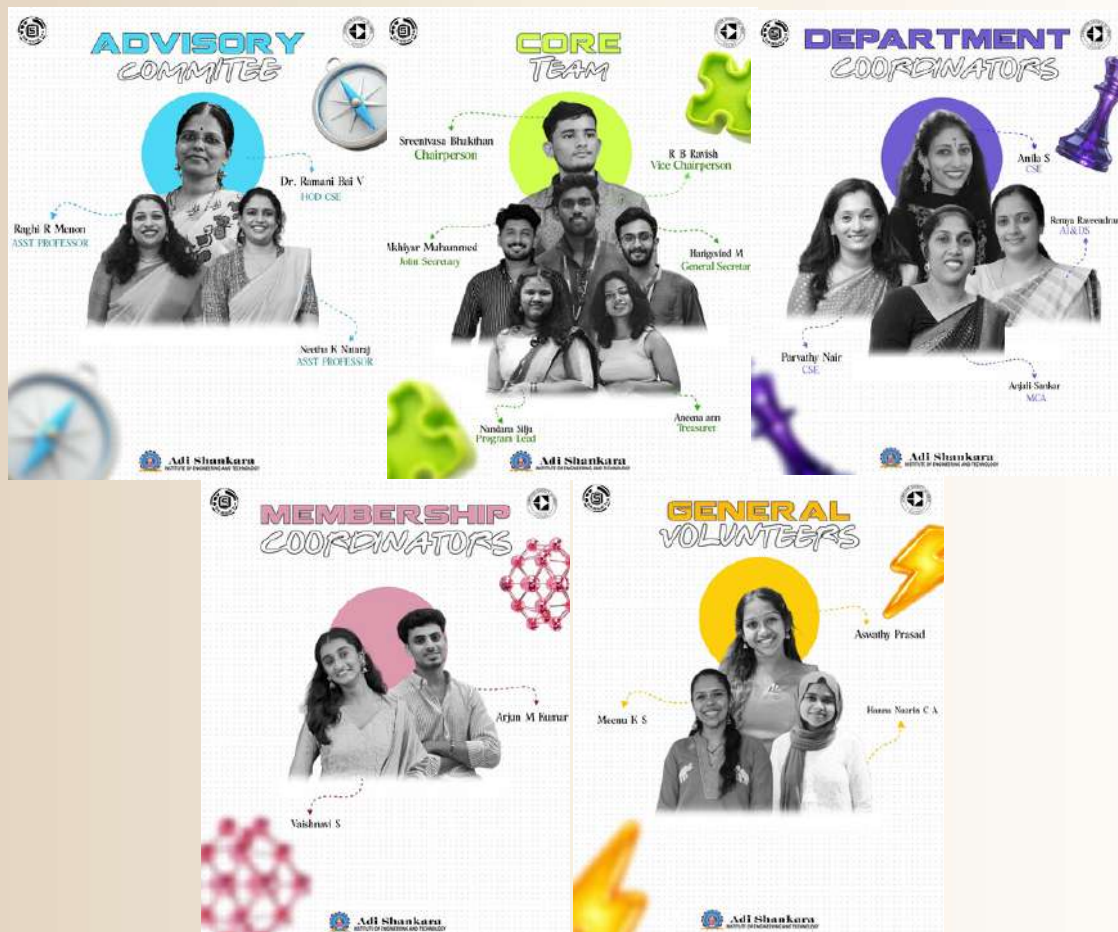
On 4 July 2026, the IEEE Computer Society Student Branch Chapter, ASIET, in association with IEEE Young Professionals Kerala Section, organized GitVerse, an online talk session under the Informatyka 6.0 series. Conducted via Google Meet at 7:30 PM, the session featured Mr. Mathew Joseph T. A., Campus Lead, μ Learn ASIET, as the resource person, who delivered a talk titled "Navigate the Universe of Git & GitHub."

The session introduced participants to the fundamentals of Git and GitHub, covering essential concepts of version control and collaborative software development. Through beginner-friendly explanations and real-world examples, the speaker demonstrated key Git operations, including branching, committing, and pull requests, highlighting their importance in hackathons and team-based software projects. The programme concluded with an interactive Q&A session, where participants actively engaged with the speaker, making the event an informative and valuable learning experience.

CSI SB ASIET Executive Committee 2026-27 Announced

The Computer Society of India Student Branch (CSI SB) at Adi Shankara Institute of Engineering and Technology announced its Executive Committee for the academic year, constituting a dedicated team of faculty members and students to lead the chapter's technical and professional activities. The Advisory Committee comprised Dr. Ramani Bai V, Head of the Department of Computer Science and Engineering, along with Raghi R Menon and Neetha K Nataraj, who guided the chapter's initiatives. The Department Coordinators included Anila S (CSE), Parvathy Nair (CSE), Anjali Sankar (MCA), and Remya Raveendran (AI&DS), who coordinated activities across their respective departments.

The Core Team was led by Sreenivasa Bhakthan as Chairperson, R B Ravish as Vice Chairperson, Harigovind M as General Secretary, Aneena Ann as Treasurer, Nandana Silju as Program Lead, and Akhiyar Muhammed as Joint Secretary. Supporting the chapter's operations, Vaishnavi S and Arjun M Kumar served as Membership Coordinators, while Aswathy Prasad, Meenu K S, and Hanna Nazrin C A contributed as General Volunteers.





The Design Team consisted of Mathew Joseph T A (Lead), Daniel Joshy (Co-Lead), Niranjana K P, and Sanjai Krishna S, while the Documentation Team included Vandana S (Lead), Muhammed Afreen (Co-Lead), Aisha Fathiha, and Anna Joy. The Technical Team comprised Yadukrishnan V S (Lead), Kamal Krishna (Co-Lead), Adithyan Anil, Tejas K M, and Krishnanunni H Pillai, who were entrusted with managing the chapter's technical initiatives and digital platforms.

The chapter also appointed Navaneeth Rajeeesh (MCA), Abhishek Prabhakaran (IV Year), Navaneeth Dileep (III Year), and Andriya Mariya (II Year) as Year Representatives to strengthen communication and engagement among students. The newly constituted committee was entrusted with organizing technical events, workshops, competitions, outreach programmes, and other student-centric activities, ensuring the continued growth and active functioning of CSI SB ASIET throughout the academic year.

μ-Debate: A Platform for Meaningful Discussions



On 18 July 2026, μLearn ASIET successfully organized μ-Debate at MuSpace from 1:00 PM to 2:00 PM, with the enthusiastic participation of over 20 students divided into Team A and Team B. The event provided an engaging platform for participants to debate on thought-provoking topics by presenting well-structured arguments, counterarguments, and diverse viewpoints with confidence. Throughout the session, students actively engaged in healthy discussions, demonstrating analytical thinking, effective communication, and teamwork while respecting differing opinions.

The debate encouraged participants to strengthen their critical thinking, public speaking, reasoning, and interpersonal skills in a collaborative and intellectually stimulating environment. The lively interactions and friendly competition made the session both informative and enjoyable for the participants and the audience alike. Following an exciting and closely contested debate, Team A emerged as the winner with their compelling arguments and convincing presentation. Overall, μ-Debate proved to be a successful initiative that fostered confidence, collaboration, and meaningful discussions while providing students with a valuable platform to learn, share ideas, and develop essential communication skills.

Guess the Imposter: A Test of Observation and Logic



On 24 July 2026, μLearn ASIET organized "Guess the Imposter" at μSpace from 1:00 PM onwards, with the enthusiastic participation of 20 students divided into two teams of 10 members each. The observation-based challenge tested participants' attention to detail and analytical thinking by requiring them to identify the item that did not belong from a given set within a stipulated time. The event encouraged active collaboration, logical reasoning, and effective decision-making as team members discussed and evaluated possible answers together. The healthy competition and interactive format created an engaging learning environment, enabling participants to strengthen their observation, critical thinking, teamwork, and problem-solving skills. The winning team was recognized for its outstanding accuracy and keen observation. Overall, Guess the Imposter was a successful and enjoyable event that fostered curiosity, collaboration, and active student participation.

Vattamesha Sammelanam



TinkerHub ASIET organized Vattamesha Sammelanam on 24 July 2026 at the open space beneath the CCF Lab, bringing together students for an informal community gathering. Held under the theme "Celebrating the Space Between Dreams and Reality," the event provided a welcoming platform for participants to meet fellow members, interact with the core team, and learn about the community's vision and upcoming initiatives.

Unlike a conventional workshop or seminar, the gathering focused on open conversations, networking, and building meaningful connections in a relaxed atmosphere. The event successfully strengthened the sense of community, encouraged collaboration, and inspired students to actively participate in TinkerHub ASIET's journey throughout the year.

CODERS CLUB – "Building Coder's Confidence" C Programming Bootcamp



The Coders Club, Department of Computer Science and Engineering, ASIET, successfully organized "Building Coder's Confidence," a 2-week intensive C Programming Bootcamp for S3 B.Tech students to strengthen their C programming fundamentals, enhance problem-solving skills, and build coding confidence through structured learning and hands-on practice. Conducted in a hybrid mode by CSE faculty members, the bootcamp featured daily programming sessions, assignments, and a final assessment. Day 1 commenced with Asst. Prof. Parvathy Nair, who introduced problem scenario-based learning to foster logical thinking and teamwork. Day 2 was led by Asst. Prof. Akshaya Jayaraj, focusing on core C programming concepts, while Day 3 featured Asst. Prof. Anila S., who introduced looping constructs through coding demonstrations and practical exercises. Day 4 was handled by Asst. Prof. Sobha T., who explained nested loops, followed by Day 5, where Asst. Prof. Divya K. S. guided students through arrays and strings using interactive coding activities. Day 6 featured Asst. Prof. Naznin M. Ali, who introduced functions and modular programming, while Day 7 saw Asst. Prof. Parvathy Nair conduct an advanced session on arrays and strings, emphasizing efficient data handling techniques. Day 8 was led by Asst. Prof. Sharika T. R., who focused on programming logic and pattern-based problem solving through interactive discussions, algorithm development, and live coding demonstrations. The sessions collectively strengthened students' programming fundamentals, analytical thinking, and confidence in solving real-world coding challenges. Participants who successfully completed the bootcamp became eligible to receive certificates and qualify for CodeBytes, the Coders Club's weekly coding initiative aimed at enhancing programming proficiency and placement readiness.

Blood Donation Camp



The NSS Unit of Adi Shankara Institute of Engineering & Technology organized a Blood Donation Camp on 14 July 2026 to promote voluntary blood donation and raise awareness about its importance in saving lives. The programme witnessed enthusiastic participation from students, with NSS volunteers playing an active role in coordinating and ensuring the smooth conduct of the camp. The initiative encouraged social responsibility and humanitarian values among the participants and concluded successfully. From the Department of Computer Science & Engineering, Arsha S Nair (S5 CSE A), Abhinavsai (S5 CSE A), Abdulla Mather (S5 CSE A), and Nakshatra Naveen (S5 CSE C) actively participated in the camp.

Hospital Equipment Repairing, Painting and Cleaning Drive

The NSS Unit organized a Hospital Equipment Repairing, Painting and Cleaning Drive on 25 July 2026 with the objective of improving the hospital environment through community service. NSS volunteers actively participated in repairing hospital equipment, painting designated areas, and carrying out cleaning activities, contributing to a cleaner and more welcoming healthcare facility. The initiative promoted teamwork, social responsibility, and the spirit of selfless service among the volunteers. From the Department of Computer Science & Engineering, Arsha S Nair (S5 CSE A), Abdulla Mather (S5 CSE A), Vyshnav P K (S5 CSE C), Vrinda K S (S5 CSE C), and Nakshatra Naveen (S5 CSE C) actively participated in the drive, which concluded successfully.

**ആശുപത്രി ഉപകരണങ്ങൾ
നന്നാക്കി വിദ്യാർത്ഥികൾ**

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കമ്മിറ്റി അതിരുകൾ ഇല്ലാത്തതായതിനാൽ ഏതെങ്കിലും വിധത്തിൽ അതിർവരകം കണ്ടെത്താൻ കഴിയാതെ പോകാൻ സാധ്യതയുണ്ട്. അതിനാൽ അതിർവരകം കണ്ടെത്താൻ സാധ്യതയുണ്ട്.

ആശുപത്രി ഉപകരണങ്ങൾക്ക്
വ്യതിയാക്കി വിറ്റാർമികൾ

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யி விரிவடைந்தது. அதன் பின்னர் நிர்வாகத்தின் கீழ் உள்ள பிழைப்புகளைக் குறைக்க நடவடிக்கைகள் மேற்கொள்ளப்பட்டன. நிர்வாகத்தின் கீழ் உள்ள பிழைப்புகளைக் குறைக்க நடவடிக்கைகள் மேற்கொள்ளப்பட்டன. நிர்வாகத்தின் கீழ் உள்ள பிழைப்புகளைக் குறைக்க நடவடிக்கைகள் மேற்கொள்ளப்பட்டன.



ആനിക്കും എത്തിയില്ലെന്ന് കേരളത്തിലെ എക്സൈസ് ഓഫീസ് അറിയിച്ചിട്ടുണ്ട്. കേരളത്തിലെ എക്സൈസ് ഓഫീസ് അറിയിച്ചിട്ടുണ്ട്. കേരളത്തിലെ എക്സൈസ് ഓഫീസ് അറിയിച്ചിട്ടുണ്ട്.

ആശുപതി
ഉപകരണങ്ങൾക്ക്
പുതുജോടിയേകി

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Digital Twins: Bridging the Physical and Digital World

Technology is changing the way we live and work. Today, industries are moving beyond traditional methods by using advanced digital technologies to improve efficiency and reduce costs. One of the most exciting innovations in computer science is the Digital Twin. It allows organizations to create a virtual copy of a real-world object, machine, or system and monitor it in real time. Digital Twins are transforming industries such as manufacturing, healthcare, transportation, smart cities, and aerospace by helping people make better decisions and predict problems before they occur.

A Digital Twin is a virtual representation of a physical object, process, or system. It continuously receives real-time data from sensors, IoT devices, and other connected technologies. This data helps the digital model behave like the real object, allowing users to monitor performance, analyze data, test different situations, and predict future outcomes without affecting the actual system. For example, a wind turbine equipped with sensors can send information such as temperature, vibration, and speed to its digital twin. Engineers can use this digital model to detect faults early and schedule maintenance before the real turbine breaks down.

A Digital Twin works through four main steps:

1. Sensors collect data from a physical object or system.
2. The collected data is transmitted through the Internet of Things (IoT) or cloud platforms.
3. The digital model processes and analyzes the information using technologies such as Artificial Intelligence (AI) and data analytics.
4. The results help users monitor performance, predict failures, and improve decision-making.

This continuous exchange of information keeps the digital twin updated with the latest condition of the physical object.

A Digital Twin consists of several important components:

- Physical Asset: The real machine, device, or system.
- Sensors: Devices that collect real-time information.
- Digital Model: The virtual representation of the physical asset.
- Communication Network: Transfers data between the physical object and the digital model.
- Data Analytics and AI: Analyze information and provide predictions and recommendations

Digital Twins have become important because they improve the way industries operate. Instead of waiting for equipment to fail, organizations can identify problems early and take preventive action. This reduces maintenance costs, increases productivity, and improves safety.

They also allow engineers to test new designs or changes in a virtual environment before applying them in the real world. This saves both time and money while reducing risks

Applications of Digital Twins

Digital Twins are used in many fields:

- Manufacturing

Factories use Digital Twins to monitor machines, improve production efficiency, and predict equipment failures.

- Healthcare

Hospitals can use Digital Twins to monitor medical devices and support better patient care through data analysis.

- Smart Cities

City planners use Digital Twins to improve traffic management, energy distribution, waste management, and public safety.

- Aerospace

Aircraft manufacturers monitor engines and other critical components to improve safety and reduce maintenance costs.

- Automotive

Car companies use Digital Twins to test vehicle performance and improve designs before manufacturing.

Some major benefits include:

- Real-time monitoring of systems.
- Early detection of faults and failures.
- Reduced maintenance and operational costs.
- Better decision-making using accurate data.
- Improved product quality and efficiency.
- Increased safety by testing in virtual environments.
- Better resource management and sustainability.

Although Digital Twins offer many advantages, they also have some challenges:

- High implementation and maintenance costs.
 - Dependence on accurate sensor data.
 - Data privacy and cybersecurity concerns.
 - Complex system integration.
 - Requirement for skilled professionals to develop and manage the technology.
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The future of Digital Twins is very promising. As technologies such as Artificial Intelligence, Internet of Things (IoT), Cloud Computing, 5G, and Big Data continue to advance, Digital Twins will become more intelligent and widely used. In the coming years, they are expected to play a major role in smart factories, autonomous vehicles, personalized healthcare, sustainable cities, and space exploration.

Digital Twins are changing the way organizations understand and manage physical systems. By creating a virtual model that continuously receives real-time data, they help improve efficiency, reduce costs, increase safety, and support better decision-making. Although there are challenges such as cost and security, the benefits are far greater. As technology continues to evolve, Digital Twins will become an essential part of many industries, making them one of the most important emerging technologies in computer science.

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Beyond the Encoder: How Native Multimodal AI is Redefining LLMs

Back in my college days, I was taught that an LLM comes down to two pieces: an encoder that reads and compresses input, and a decoder that generates output. When multimodal AI showed up, letting models "see" images and "hear" audio, the industry's answer was simple: bolt on more encoders. Need vision? Attach a Vision Encoder. Need audio? Attach an Audio Encoder. Done.

Except it isn't done. AI is quietly walking away from encoders altogether, toward what people are calling native, encoder-free multimodal architecture. Visual and audio signals get projected straight into a single decoder, no black box in between. I didn't expect this to move as fast as it has.

The problem with separate encoders

For years the standard multimodal setup was basically a pipeline of models stitched together. A Vision Encoder (something like a Vision Transformer) turned image pixels or video frames into abstract vectors. An Audio Encoder (Whisper is the usual example) processed raw speech into its own separate format. An Adapter Layer then tried to reconcile these mismatched outputs into something the core language model could actually use.

It worked. It also came with baggage.

Heavy pre-processing encoders are black boxes, and fine-grained visual detail, background audio, tiny facial cues in video, tend to get compressed or dropped before any of it reaches the main model. Running several specialized networks side by side also eats memory and processing power, which is a real problem if you're trying to build something that responds in real time. And training gets messy: instead of updating one cohesive network, you're balancing and fine-tuning several separate models at once, hoping they stay in sync.

The shift toward encoder-free architectures

Instead of stacking sub-networks, this newer generation of multimodal models takes a shortcut. Raw image patches, video frames, and audio waveforms get projected straight into the LLM's own embedding space, often through nothing more than a lightweight linear layer. Everything flows into one transformer backbone, full stop.

A few things fall out of this. The model works from raw signal instead of a pre-filtered summary, so it can reason across modalities instead of starting from a compressed guess. It's also just cheaper: drop the separate vision and audio sub-models and you free up hundreds of millions of parameters, which is roughly the

difference between needing a cloud cluster and running comfortably on a laptop. And since it's one model, you train text, vision, and sound together in a single pass rather than juggling separate training loops.

It's already shipping

This isn't a paper sitting on arXiv waiting for someone to get around to building it.

Google's Gemma 4 12B, released in June 2026, is the clearest example. It drops the roughly 550-million-parameter vision encoder and 300-million-parameter audio encoder that earlier Gemma models used, and replaces both with a projection layer of about 35 million parameters. Raw pixel patches and audio waveforms go straight into the LLM core, and the whole thing runs on a 16GB laptop, which is the part I still find hard to believe.

Meta's Chameleon does something related but not identical. Instead of a linear projection, it tokenizes images and text into the same representational space from the start, so it can process interleaved image-text streams without a separate vision pipeline at all.

And Adept's Fuyu-8B got there first, back before this was a trend: no ViT encoder, image patches projected straight into a decoder LLM, built for fast visual reasoning.

How to actually try this

Deep learning architecture talk can sound like something reserved for people with a research lab and a stack of GPUs. It really isn't, not anymore.

If you want to get your hands on it: download LM Studio or Ollama and pull a quantized (GGUF) version of Gemma 4, no cloud GPU needed, just your own laptop. If your hardware isn't up to it, Kaggle Notebooks and Google Colab both hand you a free T4 GPU, and you can load open multimodal models straight through Hugging Face Transformers. If you want to fine-tune on your own data, Unsloth is fast enough that a free Colab instance gets you there in minutes, not hours. And if you want to go further, wire a local model running through Ollama into a Python script and have it read images, parse PDFs, or run code on your own machine.

Where this leaves us

Computer science has a habit of swapping complicated multi-stage pipelines for something more direct once someone works out how. Deep learning did that to manual feature engineering years ago. Encoder-free architecture looks like it's doing the same thing to multimodal pipelines now.

I wouldn't say we've arrived at "one model that truly sees and hears the way we do." But the gap is closing faster than I expected a year ago. And you'll learn more from downloading a model and poking at it until something breaks than from reading a post like this one.

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