

## ORGANIZING COMMITTEE

- Dr. Pushpa R, Professor and Head, Dept. of CSE, AIT, Tumakuru.
- Dr. Chandrashekar, Assistant Professor and Head, Dept. of SA, AIT, Tumakuru.
- Mr. Vikas L, Assistant Professor and Head, Dept. of AG, AIT, Tumakuru.
- Mr. Sannamaregowda M, Professor and Head, Dept. of ME, AIT, Tumakuru.
- Dr. Suhas G K, Professor and Head, Dept. of ISE, AIT, Tumakuru.
- Prof. Nataraj Aradhya T S, Head, Dept. of Civil, AIT, Tumakuru.
- Mr. Chandrashekar K S, Associate Professor and Head, Dept. of Physics, AIT, Tumakuru.
- Dr. Mohan Kumar T E, Associate Professor and Head, Dept. of Chemistry, AIT, Tumakuru.
- Dr. Rashmi S B, Associate Professor and Head, Dept. of Mathematics, AIT, Tumakuru.

## ABOUT THE EVENTS AND ENQUIRY



### 1. Technoforge

- Entry Fee: Rs 300 /- Per Team (Maximum 2 Students)
- Event Date: 26/03/2025.
- Participants must know about the Hardware and Software of Ultrasonic sensors, DHT11, Servo motor, IR sensor, LCD with I2C
- Question /problem statement will be given on the spot.

#### Student Coordinators :

BASAVANA GOWDA...8073680499

SANJANA...9353405382

MANUSHREE J ... 8310243266

DARSHAN...6363447040



### 2. InnoVenture Hackathon

- Entry Fee: Rs 800 /- Per Team (Maximum 4 Students)
- 2 days 3 rounds
- Platforms: Health, Agriculture, Waste Management with Cloud

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VAMSHI...7022172362

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- 1st day: Preliminary Round
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VASUNDARA DEVI....9591905381

NARASIMHA NAYAK...6360121551

### FOR MORE INFORMATION

DR. NAGENDRA KUMAR M. 9900250339

SHASHIL... 6364501093

DR. VIJAYA KUMAR H R 8095939824

AKASH... 6364646173

GANESH .. 8217563874

SANDEEP ... 8088909245

#### Payment Details

Bank: HDFC Bank

Name: Akshaya Institute of Technology

Branch: Tumakuru

Account No: 50100204089570

IFSC: HDFC0002090



# AKSHAYA INSTITUTE OF TECHNOLOGY

Approved by AICTE, New Delhi, Affiliated to VTU, Belgaum, Recognized by Govt. of Karnataka, Obalapura Post, Lingapura, Koratagere Road, Tumkur - 572 106, Karnataka

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



# TECHNIKA 2K25

# AKSHAYA ANVESHANA

WHERE CURIOSITY MEETS CREATIVITY

## MARCH

## 25th & 26th - 2025

In Association with

Visvesvaraya Technological University (VTU)

[www.ait-tumkur.ac.in](http://www.ait-tumkur.ac.in)

## ORGANIZING CHAIR

Dr. Vijaya Kumar H R,  
Associate Professor, Dept. of ECE, AIT, Tumakuru.

## PROGRAMMING COMMITTEE

- Mrs. Bharathi N, Dept. of ECE
- Mrs. Arshiya Ruheen, Dept. of ECE
- Mrs. Arpitha H B, Dept. of ECE
- Mrs. Padmavathi N, Dept. of ECE
- Mr. K V Siddamal, Dept. of ECE
- Mr. Pradeep Kumara V H, Dept. of ECE
- Mr. Ravi Naik D, Dept. of ECE
- Mrs. Sindhu, Dept. of ECE
- Dr. Ashwini S, Dept. of Physics
- Dr. Ramesha H, Dept. of ME
- Dr. Vinay Kumar M, Dept. of AG
- Mr. Praveena D N, Dept. of ME
- Mr. Chethan B J, Dept. of AG
- Mr. Rakesh S, Dept. of CSE
- Mr. Pradeep S, Dept. of CSE
- Mr. Rakesh H J, Dept. of English
- Mr. Venugopal G T, Dept. of Civil
- Mr. Madhusudhan, Dept. of ISE
- Mr. Charan S N, Dept. of ISE
- Mrs. Keerthishree P V, Dept. of CSE
- Mr. Thanuj C G, Dept. of Mathematics
- Ms. V Vaishnavi, Dept. of Mathematics
- Mr. Swamy, Mrs. Pallavi, Mrs. Shamantha, Mrs. Yashoda: Non-Teaching Staff

## FOR TRANSPORTATION & ACCOMMODATION

Mr.Girish ... 8861294126

Mr.Raghu... 8310029637



# ABOUT AIT

**AKSHAYA INSTITUTE OF TECHNOLOGY** located in Tumakuru is founded by Akshaya Education Trust with Dr. Shivakumar K.S as the Chairman of the Institute who is a renowned Paediatrician known for his simplicity, vision and entrepreneurship. Ever since the inception of Akshaya Institute of Technology in the year 2009 with the blessing of Dr. Sri Sri Shivakumara Swamiji of Siddaganga Mutt, the College has gained great momentum to establish itself as one of the reputed institutions in the country. Tumkur is being considered for smart city development program and has a huge industrial township and food park which is generating great job opportunities in multifaceted areas. The campus is Spread over 25 acres of land with wide spread buildings and lush green open space. The objective of the institute is to impart high quality engineering education to produce graduates who are globally acceptable. To meet this objective the institute has good academic ambience, highly qualified and dedicated faculty members, well equipped laboratories with state of the art experimental facilities to produce world class engineers. The institute offers undergraduate (UG) courses in seven thrust areas of engineering: Electronics and Communication Engineering, Mechanical Engineering, Civil Engineering, Computer Science & Engineering, Information Science & Engineering, Agriculture Engineering, Artificial intelligence and data science engineering.

# ABOUT TECHNIKA

Technika Event is an extracurricular activity initiated by the Dept. of ECE in 2021, providing a platform for students to highlight their technical skills and innovative projects. This event fosters innovation, creativity, and technical expertise among students. It also encourages students to think critically and develop solutions to real-world problems.

# OBJECTIVES OF TECHNIKA

- To encourage students to develop innovative solutions to real-world problems using coding and software development skills.
- To provide a platform for students to highlight their technical skills and innovative projects in areas like robotics, IoT, and artificial intelligence.
- To encourage students to design, develop, and highlight their robotics projects.

## ADVISORY COMMITTEE

- Dr. Anandthirtha. B. Gudi** , Principal, ACSCE, Bengaluru.
- Dr. M. R. Shivakumar**, Principal, SRSIT, Bengaluru.
- Dr. K M Ravikumar**, Principal, VKIT, Bengaluru.
- Dr. A. S Raju**, Professor and Head, Department of Medical Electronics, SSIT, Tumakuru.
- Dr. Anitha S**, Professor, Dept. of ECE, RRCE, Bengaluru.
- Dr. Varadaraju H R**, Associate Professor, Dept. of AI and ML, SJCIT, Chkkaballapura.
- Dr. Bharathi Gururaj**, Associate Professor, Dept. of ECE, KSIT, Bengaluru..
- Dr. PuneethKumar T R**, Assistant Professor, Dept. of E and TE, SIT, Tumakuru.
- Dr. Lohith M S**, Associate Professor, Dept. of ECE, KIT, Tumakuru .
- Dr. Manjunath K N**, Associate Professor, Department of Mechatronics, AIT, Bengaluru.
- Dr. Ananda M H**, Assistant Professor, Dept. of EE, Reva University, Bengaluru.
- Dr. Rangaswamy Y**, Assistant Professor, Dept. of ECE, Dr. AIT, Bengaluru.
- Dr. G C Jayashree**, Assistant Professor and Head, Dept. of FM and PE, GKVK, Bengaluru.
- Mr. Harish L**, Assistant Professor, Dept. of AI and DS, GAT, Bengaluru.
- Mr. Vijay Mahantesh**, Lead DFT Engineer, EDIGIM, Chennai.
- Mr. Krishna Chethan**, SSE, ARM Embedded Technologies, Bengaluru.
- Dr. Gireesh H R**, Technical Architect, Hexaware, Bengaluru.
- Mr. Dhanush A G**, Senior Technical Consultant, VOIS, Bengaluru.
- Mr. Dinesh Naidu J**, MID Engineer, NIQ, Chennai.
- Ms. Hitha S**, Senior Engineer, Bosch Global Software Technologies, Bengaluru..

CASH PRIZE

UPTO

₹50,000 /-

LAST DATE OF

REGISTRATION

24/03/2025

### NOTE :

For all the events Participants must come up with the required components.

## CHIEF PATRONS

- Dr. S Vidyashankar** Hon. Vice Chancellor, VTU, Belagavi.
- Dr. Shivakumar K S** Hon. Chairman. AIT, Tumakuru.
- Dr. Shobha S** Hon. Secretary, AIT, Tumakuru.

## PATRONS

- Dr. B E Rangaswamy** , Register, VTU, Belagavi.
- Dr. T N Sreenivasa** , Register (Evaluation), VTU, Belagavi.
- Dr. K V Sreenivas Rao** , Principal, AIT, Tumakuru.

## CO- PATRONS

- Dr. Yathisha L**, Professor and Dean, AIT, Tumakuru.
- Dr. Nagendra Kumar M**, Professor and Head, Dept. of ECE.

## CHIEF GUEST



**Mr. Swamy Darshan B G**

Advance Lead Technologist -Controls Engineering,  
Wabtec India Industrial Private Limited,  
Bengaluru, Karnataka, India.

## KEY NOTE SPEAKERS



**Dr. Ramesha M**

Associate Professor, Department of Electrical  
Electronics and Communication Engineering  
GITAM School of Technology, Bengaluru.



**Mr. Manohar N**

Reader and HOD, Department of Electronics,  
All India Institute Of Speech and Hearing,  
Mysuru.





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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



CASH PRICE  
UPTO  
RS ₹ 50,000/-

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BRANCH: TUMAKURU  
ACCOUNT NO: 50100204089520  
IFSC: HDF00002090

FOR PAYMENT USE THIS QR



CHIEF PATRONS

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DR. SHIVAKUMAR K S HON. CHAIRMAN, AIT, TUMAKURU.  
DR. SHOBHA S HON. SECRETARY, AIT, TUMAKURU.

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DR. K V SREENIVAS RAO, PRINCIPAL, AIT, TUMAKURU.

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|| Akshaya Education Trust ||

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# TECHNIKA 2K25



**CASH PRIZE UPTO ₹50,000 /-**

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### ORGANIZING CHAIR

Dr. Vijaya Kumar H R,

Associate Professor, Dept. of ECE, AIT, Tumakuru.

WHO CAN PARTICIPATE ?

B.E /B.TECH,B.SC, BCA,MCA STUDENTS

Scan for location





## General Instructions of Akshaya Anveshana-2k25

- Participants must carry their college ID card.
- Bring Tool Kits and other necessary belongings for Your Projects
- The students from different semesters can also form a team.
- Team members must be join at the College Auditorium at 9.30 AM.
- Usage of any form of Tobacco, Alcohol, or Narcotic substances during the event is entirely prohibited.
- All participants must maintain discipline and decorum inside and outside the college premises. Failure to do so or engaging in misadventure will result in penal action.
- The decision of the Judges is final. Violation of the rules leads to disqualification.
- Accommodation will be provided based on the availability in the Hostel should come before the day of the event and should vacate in the morning with their belongings and no responsibility for their belongings.

## General Instruction for InnoVenture Hackathon:

- Duration: 24 hours of non-stop innovation
- Components: Bring your own components and tools
- Themes: Health, Agriculture, Waste Management
- Projects must involve cloud-based monitoring solutions.
- Teams must comprise a maximum of 4 members.
- Participants are responsible for bringing their own components.
- Only original work developed during the hackathon is eligible.
- A functional prototype must be submitted and demonstrated.
- The judging criteria encompass the project's innovation, functionality, cloud integration, feasibility, and presentation quality.

### ➤ **The Hackathon consists of 3-phases :**

**Phase 1:** Teams must select a problem statement and present a detailed PPT covering the solution, feasibility, expected outcomes, and technologies used.

**Phase 2:** Teams must demonstrate 75% project completion, showcasing prototype functionality, technical implementation, and progress made.

**Phase 3:** Teams must present the fully completed project with a working prototype, evaluated on innovation, functionality, feasibility, and presentation quality.



## **Participation Categories & Requirements :**

**Category 1:** Projects must involve hardware with cloud monitoring.

**Category 2:** Projects must involve either software or cloud monitoring services.

**Category 3:** Projects must provide a general solution for the selected problem statement.

**\* The project must be developed from scratch during the hackathon.\***

**\* Ready-made projects will lead to immediate disqualification.\***

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### **Rules for Technoforge:**

- **The product must not leave any part of its body behind while negotiating the work.**
- **All projects must be designed and manufactured to cause no harm to any person and no damage to the room.**
- **Projects will be inspected by the technical team before commencement.**
- **If a project does not comply with the rules, the team will not be allowed to participate.**
- **Power source switches are provided.**
- **The project model should not be damaged before the competition.**
- **Participants will create a project on the spot based on a topic given randomly through question cards.**
- **Participants must be knowledgeable about the hardware and software of the following components: LCD with I2C, servomotor, ultrasonic sensor, DHT11, IR sensor, and Arduino Uno.**
- **Internet access is not allowed during the project development.**
- **Ready-made programs are not permitted; both hardware and software must be developed on the spot.**
- **During the project-making process, participants may ask for technical help from coordinators.**
- **Participants must bring their own components.**
- **Before the competition, participants must submit their components to the coordinator to reboot and refresh the board.**



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### **General Instruction for SwiftBot Robo Race:**

- **A manually controlled robot wired or wireless has to traverse the track full of turns and obstacles in minimum possible time.**
- **The robot will be placed at start line and can start the lap when timer starts**
- **The robot should remain on track, otherwise it has to start from the last checkpoint crossed through timer will not be stopped**
- **There are penalties for each obstacle skipped and Penalties will be Added to total time**
- **Timer will stop as soon as robot crosses the finish line**
- **Scoring and penalties rules will be announced on the day of event.**
- **The robot can be wired/wireless and the Size of the robot must be less than 30x30x30 cm**
- **The maximum permissible weight is 5 KG and Potential between any two points on the robot should not exceed 12V**
- **The robot must not be made of Lego parts, or any ready-made Assembly kits, and it must be powered electrically, use of IC engine is not allowed**
- **The robot can be powered by a power source such as a battery fixed on the robot or by a stationary power source connected to the robot by a cord**
- **Participants should keep a spare batteries otherwise; it may lead to disqualification if bot is not ready or stops in between the race**
- **The length of the wire(for wired bots) should be long enough to cover the whole Arena and wire remain slack during the complete race and Tolerance of 5% will be given for only size and potential**
- **There will be only one start and one finish line and the Track width will be 30 cm**
- **The track surface and course line may have unevenness and will be certain obstacle in the racetrack, which will try to slow down the bot. Track may consists of bridges, sopped breakers, marble pit, slippery path, curve ramp down. Seesaw etc....**
- **A team can have maximum of 2 members.**
- **Participants who misbehave may be asked to leave the competition area and risk being disqualified from the contest.**
- **Robots or participants that cause deliberate interference with other robots or damage to the arena will be disqualified**
- **All decisions about scoring, Gameplay and timing, and participants made by the Organizing Committee are final. Teams should completely respect their vote and decisions**
- **Two technical time outs (2min) will be provided and the Participants should be present at the allotted time slot.**