

RENQUEST 2026

Organized by IEEE RAS CUSAT SBC

About RENQUEST

RENQUEST is an innovative robotics and technology-focused event conducted by IEEE Robotics and Automation Society (RAS) CUSAT SBC. It is designed to challenge participants' skills in robotics control, immersive virtual reality, and AI prompt engineering. The event promotes hands-on learning, problem-solving, and creativity through interactive competitions.

The participant must participate in all the 3 events the combined score will be used to determine the winner.

Time: **9 am to 5 pm**

Date:**07/03/2026**

Event 1: Drone Flying Competition

Event Name: AeroQuest – Drone Flying Challenge

Description

AeroQuest is a precision-based drone flying competition where participants must navigate drones through a custom obstacle course consisting of barriers, loops, and controlled pathways. The drones will be **provided by the organizers**, ensuring fairness and focusing on participant skill rather than equipment.

Objective

- Test participants' drone handling and control skills
- Evaluate precision, stability, and navigation ability
- Promote hands-on experience in UAV operation

Event Format

- Participants will be provided with drones by organizers
- Each participant/team will get a fixed time slot
- They must fly the drone through:
 - Barriers

- Circular loops
- Designated checkpoints
- Fastest completion time with least penalties wins

Judging Criteria

- Completion time
- Accuracy
- Number of obstacles successfully cleared
- Penalties for collisions or missed checkpoints

Skills Tested

- Hand-eye coordination
 - Drone control
 - Spatial awareness
 - Precision navigation
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Event 2: VR Escape Room

Event Name: Virtual Escape Quest

Description

Virtual Escape Quest is an immersive virtual reality challenge where participants enter a custom-designed VR environment. Participants must solve puzzles, explore clues, and complete tasks to escape the virtual room within the given time.

Objective

- Test problem-solving ability in immersive environments
- Encourage logical thinking and teamwork
- Provide hands-on experience with VR technology

Event Format

- Participants will use VR headsets provided by organizers
- Each team enters a virtual escape scenario
- They must:

- Solve puzzles
- Find hidden clues
- Unlock virtual mechanisms
- Escape within the time limit to win

Judging Criteria

- Time taken to escape
- Number of clues used
- Puzzle solving efficiency

Skills Tested

- Logical thinking
 - Observation skills
 - Teamwork
 - Adaptability
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Event 3: Reverse Prompting Challenge

Event Name: PromptQuest – Reverse Prompt Engineering

Description

PromptQuest is an AI-based challenge where participants are shown an output (image, text, or result) generated by AI. Their task is to identify or recreate the correct prompt that could produce the given output.

Objective

- Introduce participants to AI prompt engineering
- Test creativity and logical reasoning
- Develop understanding of AI behavior

Event Format

- Participants are shown AI-generated outputs
- They must write prompts to recreate the output
- Closest matching prompt wins

Judging Criteria

- Accuracy of prompt
- Similarity of generated output
- Creativity and efficiency

Skills Tested

- AI understanding
 - Creativity
 - Analytical thinking
 - Prompt engineering
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Expected Outcomes

- Practical exposure to emerging technologies
 - Increased interest in robotics and AI
 - Development of technical and creative skills
 - Enhanced learning through competition
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Organized By

IEEE Robotics and Automation Society
CUSAT Student Branch Chapter

General Rules and Disclaimer

- All decisions made by the organizers will be **final and binding**.
- The organizers reserve the **right to modify, update, or change the rules, format, or structure of any event** at any time if required due to technical, safety, or operational constraints.
- Participants are expected to **follow all instructions provided by the organizers and volunteers** during the event.
- Any form of **misconduct, damage to equipment, or unfair practices** may result in disqualification.
- The organizers are **not responsible for any personal injury or loss of personal belongings** during the event.

