

11th Tunisian Workshop on Embedded Systems Design TWESD'24



Generative AI and the Challenges to Education

June 22-24, 2024, in Sousse, Tunisia http://www.ceslab.org/TWESD2024/

IoT Competition

Smart Cities, Agriculture, Industry 4.0, Healthcare, Robotics



Best Project IoT in TWESD 2024 is a competition that aims to inspire talented PhDs and students to develop innovative technological designs and promote the exploitation of the potential of platforms like Arduino, ESP32, Raspberry, STM32... with the aim of creating solutions to the challenges faced by the scientific community.

THEME

The challenge primarily encompasses the realms of IoT (Internet of Things), encouraging participants to come up with innovative solutions within these technological fields.

Participants are encouraged to focus on the following topics, including but not limited to:

- IoT (Internet of Things): Creating interconnected smart systems, devices, and applications.
- Integration of AI technologies with IoT: To enhance the capabilities and functionalities of IoT devices.
- Smart Agriculture: Implementing technology for more efficient and productive farming.
- Industry 4.0: Innovations in manufacturing and industrial processes.
- Smart Home: Enhancing living spaces with intelligent devices.
- Smart city: Enhancing the quality of life for residents.
- Robotics: Innovative developments in the field of robotics.
- Electric and Hybrid Vehicles: Advancements in sustainable transportation.

CHALLENGING

The challenge focuses on leveraging platforms such as ESP32, Arduino, Rock, Raspberry Pi, Jetson, STM32, and related technologies in the realm of IoT (Internet of Things). By delving into various fields like smart agriculture, electric vehicles, robotics, and smart homes, the challenge seeks to expand and refine the functionalities of these technologies. Ultimately, it aims to foster their widespread adoption across diverse sectors, thereby propelling advancements in science and technology.

SUBMISSION Please submit your work by using this form:

https://docs.google.com/forms/d/e/1FAIpQLSdOcAmsmYNB1SauID9-L8hcpv7Ze0CM8LuRhr1KA1VUCn9IQ/viewform?usp=sharing

SCIENTIFIC COMMITTEE

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GOALS

- Stimulating Innovation: Encourage creative approaches leveraging IoT.
- Practical Solutions: Tackle tangible scientific problems.
- Active Skill Development: Improve technical proficiency through practical projects.
- Diverse Applications: Foster the use of IoT across various domains.
- Advancing Technology: Drive progress by exploring technological limits.

GUIDELINES AND OUTPUTS

- Proposal PDF document: Participants are required to submit a PDF document containing an executive summary of the project. defining the problem, presenting solutions, explaining the approach, project schedule, and budget.
- Presentation: participants are required to deliver a concise 5-minute presentation to be submitted as a file (if .pptx) or as a link with shared open access. summarizing their work.
- Mandatory Prototype: A first working prototype is mandatory for submission, it can be software, hardware, a combination of both, a simulation, etc...
- Optional Video: Teams can submit a 2 Mn, max video in mp4 format demonstrating the developed prototype.

RULES AND CRITERIA

This challenge is only for students, each project can be presented by one team, with a maximum of 2 members per team. This challenge has two phases, a selection phase based on the deliverables mentioned in this PDF, to be submitted in the form, and a final phase where selected teams will be invited to participate and pitch during competition. Selected teams will be given further instructions on how to proceed with the final phase.

Pitching Duration: 5 minutes + 2 minutes video + 2 minutes Q&APitching Language: English, frenchMaximum Participants per Team: 2 students

SCORING (20 points)

Non-technical: 8 points

- Quality of pitching and presentation: 4 pts
- Creativity: 4 pts

Technical: 12 points

- Technologies used: 4 pts
- Quality of presented prototype: 6 pts
- Covering the business scope: 2 pts

WINNERS

Number of winners: 3 Best Teams Prize: all 3 Best teams will be awarded a certificate and a surprise prize



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