HackAP – Vision -Resource Conservation - IoT

28 & 29 January 2023

AU Incubation Center (ā-Hub)

Alcove Partners, AU Incubation Center (ā-Hub), TiE Andhra Pradesh and NASSCOM COE-IoT are happy to announce the second in the HackAP series of hackathons. The theme of the hackathon will be 'Vision-Resource Conservation-IoT'. The hackathon is sponsored by The Digifac and Sandlogic Technologies Pvt. Ltd.

We encourage participants to pick one of the following real-world problems and come up with a solution. You should be able to show a working prototype or a minimum viable product (MVP).

Problem statements:

1. IoT : Company has multiple vending machines with various items across multiple locations and would need a IoT based solution along with platform to connect & collect data on quantity of items, consumption pattern. The solution will be offered with integrated dashboard with all the data of machines across locations.

2. Computer Vision: Company has products assembled and packed on conveyer belts and inspection is done manually wherein there is error on identification of defects on all products. Hence there is need for vision based automated inspection system with higher accuracy along with dashboard with all the metrics on count, defects identified.

3. Computer Vision: When analyzing engineering complex engineering drawings, some of the numbers are covered by text.
    a. How to identify such numbers/ text?
    b. How to interpret such numbers/text?

4. IoT/Vision: Precise people counter for single entry/exit door where multiple people enter/exit at once.

    Details: Track the number of people in a predefined area. It could be in front of lifts, entry/exit into a shopping mall, etc. The solution should be cost effective and easy to install. The computation of the number of people should happen on the edge.

5. IoT: Mesh based lighting that can be controlled with a single module.

   Details: A single node would be connected to internet, rest of the lighting sources would need to form a mesh to increase the network coverage and should be able to control the lighting individually.

6. IoT: Low cost water level indicator with auto on-off facility.

   Details: A low cost solution to measure the lvel of water in the tank and automatically control the motor whenever the water level reaches the level defined by the end user.

7. IoT: SD card-based offline data logger.

   Details: A sensor connected to RS 232 or RS 485 interface should be connected to ESP to transmit the data and this data to be stored in a SD card at a predefined time interval.

For any questions, please contact: auincubation@gmail.com or use the WhatsApp group (https://chat.whatsapp.com/BAIiMFsO7tr3mS5ZaF9wKd)

All the best.