CS321 Projects'19

TENTATIVE LIST

1. Vehicle Queue Management

- Need to solve the real problem existing at the entrance/exit gates of the IITs where vehicles queue up to make an entry
- Can we automate the whole process to solve this problem??
- Management of vehicular traffic over gateways
- MQTT for flow of personalised/ generic data

2. Waste (disposal) Management

- Pilot project for core canteens and hostel canteens of college
- Ensuring waste disposal (automated or instigated)
- Using MQTT

3. Automated Items dispenser

- Can you provide a solution for the problem which you all faced to collect the required items for the hardware lab?
- Automated hardware item dispenser with selective dispensing capability
- Push and pop support with real time sensing of storage status
- MQTT usage

4. Automated room conditioning

- Automated/ Remote electric appliance control
- Ambience sensing and regulation
- MQTT usage

5. Smart Door

- Automated opening and closing
- Access control
- Intrusion detection and alert
- MQTT usage

6. Smart plant pot

- Automated watering on need basis
- Sunlight following or avoidance on need basis
- Solar charging
- Remote plant health stats
- Note: Soil, water and light shall be leveraged for experimental purpose; real plants should be avoided.
- MQTT usage

7. Smart campus map

- Real time campus map with live feeds
- Crowd sensing and management
- Route mapping
- MQTT usage

8. Network of cycles

- Fencing for proximity of cycles
- Tracking of cycles
- Remote access for paired cycles
- MQTT usage

9. Mess Management

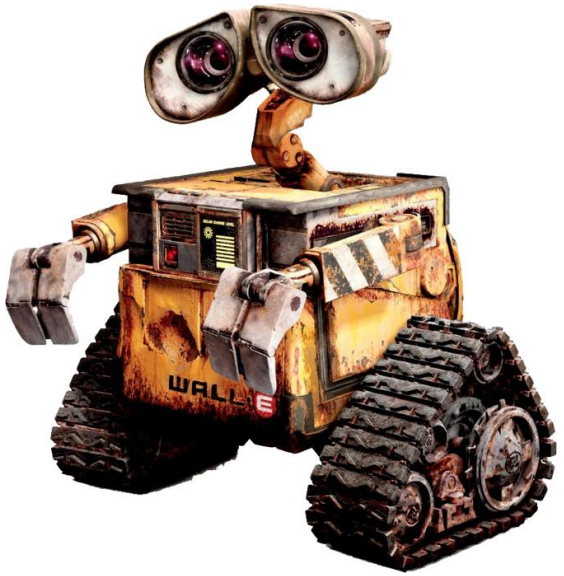
- Can you implement an efficient pay as much as you eat system for our mess?
- The mess fees should be paid based on how much quantity you consume
- Can you automate the whole process

Hardware based game

- Sensing and Actuation of physical objects
- Real time response of game environment
- MQTT usage

Mobile Robot(s)

- Terrestrial/aerial/aquatic/hybrid
- Manoeuvrable in real physical locations
- MQTT usage



Innovation is welcomed!!