

Report

Name of activity: GUIITAR Robotics & Home Automation Workshop

Nature of the Activity: 3 days Workshop (Hands on experience)

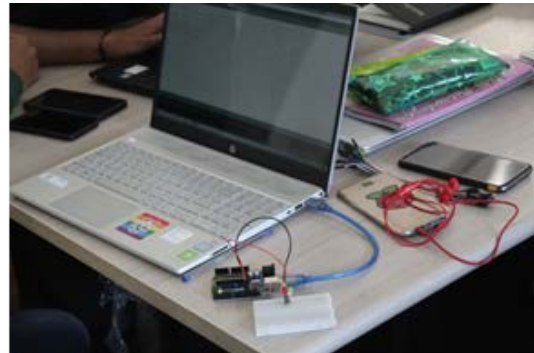
Date and Venue of the Activity: 9-11 Nov 2019, GUIITAR Room at SOT Auditorium

Organized by: GSFC University Incubation, Innovation, Technology & Applied Research Centre (GUIITAR)

Number of participants for the event: 65

Major discussions in event:

Day 1: Basics of Software installation, Micro-controller, Programming Led blink and patterns in robotics and automation, Interfacing of light sensor, IR Sensor and ultrasonic sensor, Automaton street light, Laser security system Burglar and fire alarm and Automatic Door.



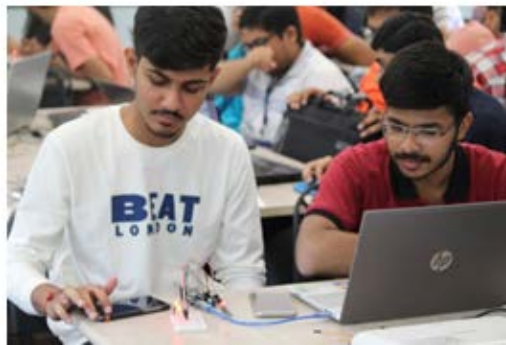
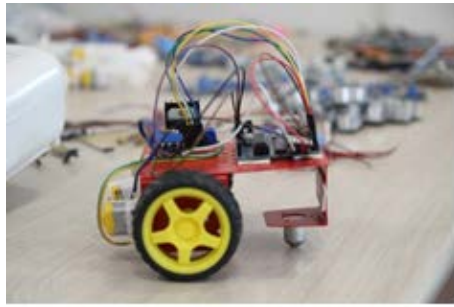
Day 2: Interfacing Motor driver, Direction control of motors, Automatic Door, Assembling a Basic bot, Programming and construction of a Obstacle avoider robot, Edge detector robot, Concept of line follower robot Real life application of the same,

Concept of fire fighting robot, interfacing water pump module, Interfacing Soil moisture sensor, Analogue to Digital Converter, taking analogue input from form soil moisture sensor, Construction and programming automatic irrigation system.



Day 3: Training on Automatic irrigation system using soil moisture sensor, Interfacing water pump module, Interfacing Relay Module, Home automation using Bluetooth, App development for home automation system, Voice Controlled Automation, App development for voice Automation.

A competition was held at the end of the workshop in which students were asked to make a Bluetooth controlled robot which can be controlled by a single key. All the students participated in the competition and three teams secured 1st, 2nd and 3rd place. One complete robotic kit was provided to each group of Four registered Students.



Winner of the design challenge



Learning Outcomes for the Activity:

Students were trained to do programming as well as assembling of basic Robot.

Students made their own circuits using provided kit and run the robots.

How will it be useful for Students / School / University:

Students can also conduct small workshop in different schools or college after achieving expertise in this field.