

**TITLE OF ACTIVITY: WORKSHOP ON SENSOR BASED ROBOTS**

**Date:** 11<sup>th</sup> and 12<sup>th</sup> April 2018

**Venue:** EIMS Lab

**Workshop conducted by:**

Mr. Abhigyanam, Technical Head, IndEyes Infotech,  
Pvt. Ltd., Bhopal

**Objective:**

- To introduce basics of microcontrollers: various types of Microcontrollers including ATMEGA 8, ATMEGA 16, and PIC Microcontroller, types of sensors: various types of sensors (IR sensor, Fire sensor, Ultrasonic sensor) and working principle of each sensor, motor driver IC: motor driver IC and its PIN configuration.

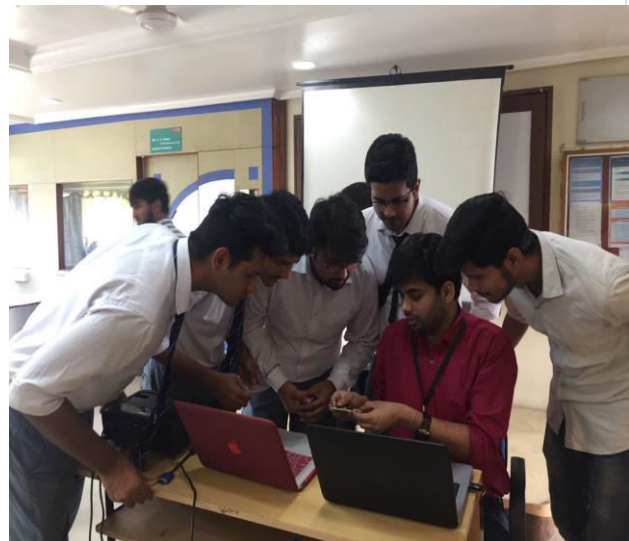
**Summary of the Workshop:**

- The workshop provided the basic knowledge of Microcontrollers, sensors and motor driver ICs. The trainer, Mr. Abhigyanam conducted the hands-on session based on microcontroller coding. He taught

**Photographs:**



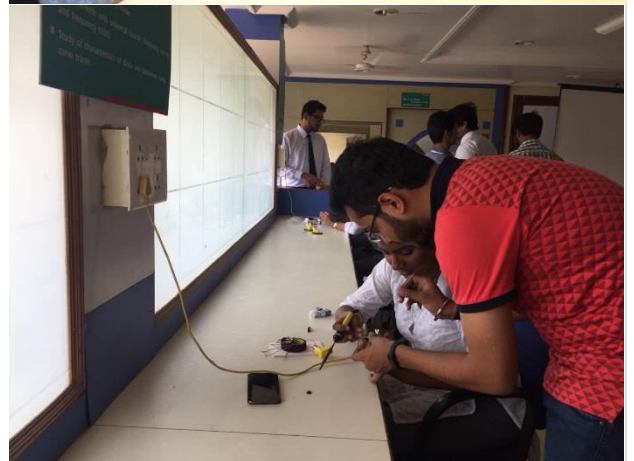
Mr. Abhigyanam, Training Head, IndEyes Infotech Pvt. Ltd., Bhopal



Mr. Abhigyanam and Students: Active participation of students during training program

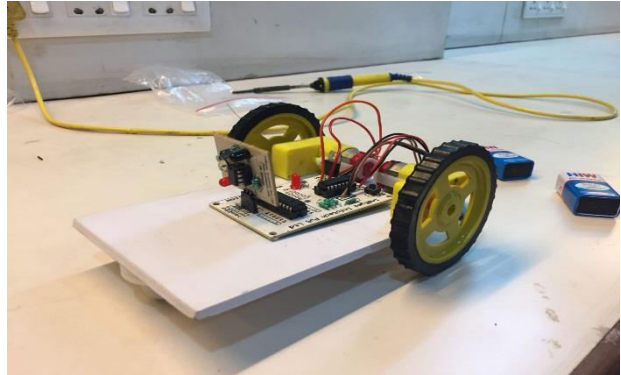
how to code the microcontroller and motor driver IC in order to design the robot.

- Students assembled the hardware required to make the robot (soldering of Microcontroller, Sensors, Motors and Motor driver IC on the PCB). Students were given the opportunity to build robot from scratch. This enabled the students to explore the designing process of the basic structure of the robot. After assembling the robot students burnt the code into the microcontroller with the help of programmer (Atmega8) and made robots for obstacle avoider.
- More focus was given on the implementation of various types of robots such as light sensing robot, fire sensing robot, obstacle avoider robot with the help of microcontroller coding.



**Outcome:**

- The students were able to acquire basic knowledge of microcontrollers and its coding for various robotic applications.
- This technical training program gave an opportunity to upgrade student's technical skills and logical approach and also provided the platform to learn and explore it.





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