

July 6 2018

## **MINI PROJECT DEMONSTRATION On ULTRASONIC SENSOR USING ARDUINO BOARD**

### **About Us:**

Mr. Ajay Sobi and Mr. K. Ganeshkumar (IV ECE) have presented and shared their mini-project work with II ECE students for their future endovenous in the field of research activities held on 06.07.2018 at RF Microwave Lab, Department of ECE. Mr. Ajay Sobi and Mr. K. Ganeshkumar is an active member of ROBO Club, which has associated with the PERI Association of Communication Engineers (PEACE). The objective of ROBO Club is to bring out the innovative ideas from student sectors by supporting financial and conducting various workshops for their future welfare of the student in the research activities.

### **Acknowledgment:**

First and foremost, we would like to express our sincere gratitude to Dr. Jasmin Jeni, Head of the Department and all the department staffs who have supported and encouraged us to work on mini-project. We were privileged to experience a sustained enthusiastic and involved interest from their side. This fueled our enthusiasm even further and encouraged us to boldly step into what was a totally dark and unexplored expanse before us.

### **Objective:**

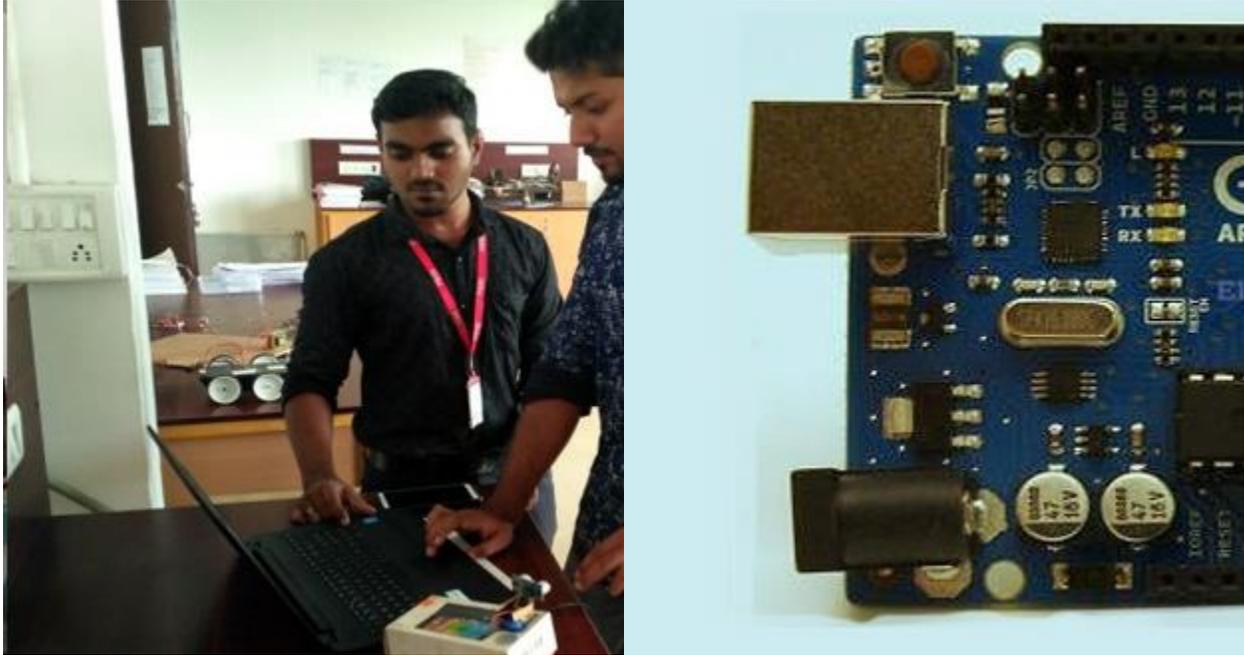
The main objective of this mini-project is to detect the object or obstacle clearly by proper distance measurement of the object or obstacle and also calculate the direction of the object under movement.

### **Short Description about Mini-project:**

Ultrasonic sensor emits an ultrasound at 40 KHz which travels through the air and if there is an object or obstacle in its path it will be bounced back to the module considering the travel time and speed of the sound can be involved to calculate the object or obstacle distance. The ultrasonic sensor (HC-SR04) module has 4 pins, ground, Vcc, Trig and echo. The ground and Vcc pins of the module needs to be connected to the ground and the 5 volt pins on the Arduino board respectively, and the trig and echo pins to any digital input/output pin on the Arduino board. In order to generate the ultrasound you need to set the trig on a high state for 10 micro second. That will send out an 8 cycle sonic burst which will travel at the speed sound.



Mr. Ajay Sobi and Mr. K. Ganeshkumar (IV ECE) have demonstrated their Mini-Project work and share their knowledge about Arduino Board applications to II ECE 'A' Students at BS-6 Class room.



Students involved in Robotic project and Arduino Module Kit have shown in the above figure.