

Final Project – Motion/ Sound Detection with Arduino Uno R3

Project Overview:

- This project utilizes Arduino Uno R3 board, that will be connected to Ultrasonic Distance Detector and PIR Motion Sensor to detect the distance of object from the setup. Which activates a Green LED Light if an object is within a certain distance and detects motion or a Red LED Light if the object is outside of a certain distance.

Equipment Being Used:

- Arduino Uno R3 Board
- Ultrasonic Sensor (HC-SR04)
- PIR Motion Sensor
- 5mm LED & Resistor Kit
- Jumper wires
- Breadboard

Software Being Used:

- Simulink
- MATLAB

MATLAB Add-Ons:

- Simulink Support Package for Arduino Hardware
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- DSP System Toolbox
- Simulink real-time
- Simulink
- Simulink Compiler
- Embedded Coder
- Control System Toolbox
- Simulink Control Design
- MATLAB Compiler