**Microcontroller Project**

Description:  
Dispense an aerosol can when the user is within a certain distance of an IR sensor.

Requirements:  
Get distance from user to sensor, if distance within certain range and device switched on, trigger server to dispense the aerosol can.

1. AT90USB162 – Atmel AVR microcontroller
2. Sensor interface
3. ISR
4. Custom PCB
5. All code will be written myself
6. Will take ~25 hours to complete:
   1. 5 hours to design PCB
   2. 5 hours to assemble PCB
   3. 15 hours to develop software
7. The system will be evaluated by the range of light levels in which it is operable.

Sprint timeline:

* 1. 5 hours to design PCB
  2. 5 hours to assemble PCB
  3. 15 hours to develop software

System testing:  
The system will be tested 5 times in each of the following light levels:

1. No light
2. Some light
3. Medium light
4. High light
5. Direct light

It will be considered a success if it can successfully operate in 90% of cases in medium and high light.

Final deliverables:

1. Parts list
2. PCB schematic
3. Code
4. Appropriate documentation
5. User instructions