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MTEC 2280

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Final Project Proposal

**Project Description**

For my final project, I had two main Arduino ideas I wanted to try out. The first was an Arduino Smoke Detector and the second was an Arduino Breathalyzer. After doing some research, I think the smoke detector would be more doable with my current skill level. The smoke detector would use a MQ-2 sensor that can be connected to Arduino. The MQ-2 sensor would be able to detect smoke and other flammable substances including methane and alcohol.

The sensor works with a voltage output and that is changed by the amount of smoke or gas the sensor picks up. The greater the smoke level, the greater the voltage the sensor will put out and vice versa. By using the sensor combined with an Arduino and a simple piezo buzzer, the project will cause the buzzer to go off if the gas or smoke levels are too high. I would also include LEDs on the breadboard to indicate if smoke levels are too high. If the smoke is level is high, a red LED will go off to indicate so, and if the gas level is normal then a green LED will blink.

For this project I will need to become more familiar with how the sensor works. The code for lighting up the LEDs and making the Piezo buzzer go off are all things that we have already covered in class. For the code I would have to use if and else statements along with also reading up on how the arduino works with the sensor.

**Project Materials**

* Arduino and Breadboard
* 2 LED (One green and One red)
* Basic Wires and resistors
* Piezo buzzer
* MQ-2 Smoke Sensor
* Electrical Box for mounting all the electronics in

**Rough Project Sketch**

