# Overview

Our project is a prototype for a high-security RFID door lock system. The program involves 2 Arduinos, a master and a slave. The master runs all the hardware components, including an RFID scanner, 2 buttons, a piezo speaker, a screen and a servo (to represent the door lock mechanism). The slave Arduino controls the security and has no hardware components. They’re both connected through Bluetooth serial, using HC-05 modules.

# Specification

## Face Detection

Open CV HAAR detection, as the door will typically be in the same place, so lighting conditions shouldn’t change much, and is more accurate. The computational power required

# Implementation

# Difficulties

# Conclusion

# References

<https://www.youtube.com/watch?v=Q8QlNuTUe4M>

<https://realpython.com/face-detection-in-python-using-a-webcam/>

<https://docs.opencv.org/3.4.3/d7/d8b/tutorial_py_face_detection.html>

<https://www.arduino.cc/en/Tutorial/AnalogInputPins>

[https://www.arduino.cc/en/Guide/TFT#toc9#](https://www.arduino.cc/en/Guide/TFT#toc9)

<https://www.arduino.cc/en/Reference/SPI>

<https://playground.arduino.cc/Main/PinChangeInterrupt>

<https://playground.arduino.cc/code/timer> (not used)

<https://www.forward.com.au/pfod/ArduinoProgramming/TimingDelaysInArduino.html>

// Focus needs to be mostly on the comms, and why we need it, and how we used it (as that’s what is in the spec). Do talk about the other stuff, but it doesn’t need to be as much of a focus, as it’s not specifically what we needed to do

// Mention why we “couldn’t” do the full project, so why we did a prototype style thing

// Discuss issues (BT comms, Bubble boi, PC-Arduino serial, fritzing schematic, etc..) and pros-cons of approaches we took

// Video needs to just show how the actual program works on a user-based level. Show it unlocking with given circumstances, and locking out with others

// Code is where a lot of explaining can happen. Comments need to be as clear as humanly possible (more than 1 line for the most part)

// “There needs to be a balance between project difficulty, code and documenting” blah blah blah

// Paragraphs for writing, as opposed to more sectioned off (Basically not like mine)

// Video is how they mark the implementation of the program

Obviously talk about the stuff we did ourselves mostly, but we’ll check on each other’s too

DON’T FUCK WITH THE FORMATTING