Folder Contents

**Codes** – Various codes used in the project

XPORT – Program used to pair Bluetooth chip with matlab

FFT\_on\_the\_DUE – Fast Fourier Transform code for the Arduiino Due

Code\_Used\_In\_The\_Due\_For\_ADC\_Control\_And\_Transmission - Due Program

Code\_Tha\_Is\_Uploaded\_on\_UNO\_used\_to\_modeulated\_signal - Uno program

AT\_Programming – Bluetooth chip programming

realtime\_Matlab.m – Matlab code used for displaying data

**Data Sheets** – Data sheets of the IC components included on the board

**Eagle PCB** – Eagle files used for fabrication including the schematic, layout, the gerber files, and the library

**Components** – A list of all the components that go on the final PCB, including prices for each of the pieces.

**Poster** – Poster taken to various events, contains quick details on the project.

Running the System

Running the system requires that the uno and the due are programmed appropriately. With the current code, the arduino due should be connected through a usb connection to the laptop used. The port in the code should be edited to reflect what port the arduino is connected to, then the following lines can be run:

> fclose(com);

> realtime\_Matlab

The com needs to be closed before the code is run, otherwise the program will crash.

To run system with the bluetooth, make sure the uno, the due, and the Bluetooth chip are programmed appropriately, and you need a program called Xportto connect the Bluetooth, which once you turn on should connect to a port automatically.