Journal 1

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1 Progress Log

Installed Android Studio and created a test application targeting Android 4.0 "Ice Cream Sandwich" as the minimum supported operating system.

Created an Android Virtual Device (AVD) to emulate the Google Pixel 2 device. The AVD will be used to quickly test prospective features and UI arrangements from within the development environment. Note, AVD's do not support Bluetooth.

In order to test Bluetooth functionalities, a Samsung Galaxy S6 was set up for developing and the application is uploaded to it via USB from Android Studio

Within the test application created the launcher activity (the application's landing page) and designed a very basic UI to turn on and off Bluetooth as well as Bluetooth discoverability.

Created the androidmanifest file to manage Bluetooth permissions within the application.

Ordered three MPU-6050 3-axis accelerometer gyroscope modules to act as our sensors in collecting data. Also ordered an Arduino with Bluetooth capabilities over which to relay the sensor data to the application.

2 Next Steps

Following this achievement my partners and I intend to test the setup of the sensors and Arduino by connecting to them with the app and making sure that data is recorded when the sensors are moved. Then we will take a lacrosse stick (model undetermined) and attach the sensor set up. We will then meet outside of school to begin accumulating data.

3 Reflection

I accomplished my original objective for this period of creating a basic Android application in which to handle Bluetooth connections. It has yet to be tested with the Arduino and sensors, however, as they are not yet in my possession.

The application also has much room to improve in terms of both functionality and UI design. Ultimately we hope to offer a sleek, clean interface in which to quickly collect data from the sensors and identify movements.