sdmay18-12: Pilot Biometrics - ECG waveform captures
Week 9 Report
November 10 - November 24

Team Members
Zachary Glanz — *Driver Design Lead*
Andrew Jones — *Algorithm Design Lead*
David Kirpes — *Circuit Design Lead*
Justin Bader — *PCB Design Lead*
Kory Gray — *Operating Systems Lead*
Ryan Gallus — *Team Lead*

Summary of Progress this Report
For this period, our team focused on designing the algorithm and software filter. We began writing the needed methods for the main algorithm. Research continued into the software filter design and previous research into classifying ECG waveforms for certain conditions. The team also familiarized ourselves with the new board and studied the data sheet.

Pending Issues
Need to reevaluate the earlier memory issues but with the new board. May need additional storage from an SD card reader. Still do not have the ECG sensors, so software filter design is being done with sample data.

Plans for Upcoming Reporting Period
This upcoming week, we will focus on implementing the algorithm design and software filter design into the new board.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Zachary Glanz	Real progress was gated this week by delivery of a few components.	2	32
Andrew Jones	Started preliminary design of main algorithm. This involved methods needed and pseudocode for algorithm.	3	29
David Kirpes	Continued with previous research activities. Getting set up to begin programming once the project reaches that point.	6	34
Justin Bader	Working on software filter design. Medians seems to be the way to go. Need to track down data that I can use to make sure my filter works. Also looking into open source	3	33

	ECG problems and researching how to create an algorithm that will classify ECG wave forms for certain problems. Will most likely look at an ideal ECG/Baseline ECG for a subject and that track deviations in that base waveform over short periods of time.		
Kory Gray	Researched data sheet for new board. Made list of potential connections we can use. Looked into which ones would be needed and if any changes are necessary in order to add an SD card.	3	29
Ryan Gallus	Focused on classification methods for ECG waveforms. Once the waveform has been captured and filtered, the algorithm will need to detect various anomolies and determine if these are health problems. To do this, we are exploring using a classification tree.	3	36