Senior Design 491 - Weekly Report - DEC15-04
Fall 2015 Week 11/02 - 11/28 (Month of November)

Advisor: Suraj Kothari
Project: Future Wearables
Client: Ted Krepos ("*Krepos Physical Therapy and Performance*")
Ensoft - Jeremías Sauceda
Members: Aaron Reyes - Team Leader
Nick Plutt - Webmaster
William Park - Communication Leader
Josh Cline - Key Concept Holder #1
Nick Gonner - Key Concept Holder #2

Monthly Recap:

Since we are nearing the end of the semester. This month was a huge crunch in all of our work. We had to make sure to produce another prototype for testing, but this third prototype had to be something that was close to the final prototype design.

This month was more focused on the software as well as placement of the hardware on our new compression shirt prototypes. Following the meeting we had with Ted last month, we made some huge changes in the prototype of the wearable device. Mainly it involved incorporating compression shirts. During this phase, we had two different compression shirts made for testing. The first one was a basic shirt that we used as a template. We drew on the shirt to create relative locations to sew in the conductive fabric. The second shirt that was made following the first compression prototype finalized our testing so that it was cleaner and presentable to Ted and Jeremias.

The middle of the month was mainly focused on cleaning up our work and preparing for our final presentation. We had to meet with George Amariucai to give a mock presentation of our year long project.

DEC15-04

Meeting Overview:

November 5 2015 - **Meeting-28**
Duration: 5.0 Hours

Attendance - **28**

William Park	Present
Nick Plutt	Present
Aaron Reyes	Present
Josh Cline	Present
Nick Gonner	Present

1. This meeting was meeting after all the work was done in creating the compression shirt.
    a. A lot of testing was done in testing the compression shirt including conductive fabric location and IMU placement.

Hardware

1. Hardware at this point was mainly just testing and processing the sensors. All of the sensors were finalized at this point and a lot of processing was done on them to ensure that the data was clear and readable for Ted.
2. There was a lot of final soldering that was done to the microcontroller as everything was placed in temporary locations before hand.
3. First initial compression shirt was created so that the conductive fabric could be tested without the use of Ace wraps. We wanted to test to see if the compression shirt was able to hold the conductive fabric in place.

Software

1. Bluetooth data and Graphing was implemented and working on the phone.
2. Talks about parsing the bluetooth data so it can be prepared to be placed on the database
3. Graphing porting needs to be able to communicate with the stored data to create graphs that range from set time ranges.

Meeting Overview:

November 8 2015 - **Meeting-29**
Duration: 6.0 Hours

Attendance - **29**

William Park	Present
Nick Plutt	Present
Aaron Reyes	Present
Josh Cline	Present
Nick Gonner	Present

This meeting was mainly just organizing for our mock presentation. We had to create new slides and review what changes we made from our last project presentation in May. A lot of time was spent writing and creating slides as well as practicing those slides out loud to make sure that our presentation to George Amariucai would be good.

Meeting Overview:

November 13 2015 - **Meeting-30**
Duration: 1.0 Hours

Attendance - **29**

William Park	Present
Nick Plutt	Present
Aaron Reyes	Present
Josh Cline	Present
Nick Gonner	Present

This meeting was pretty simple. It was the presentation we gave to George Amariucai. We received feedback in what changes should be made to our presentation slides. Overall he said that content was good.

DEC15-04

Accomplishments this month:

1. Prototype Conductive shirt was sewed together.
2. Graphing on the Application works in Real time
3. Bluetooth Data works in Real-time on the application
4. All the data was parsed and placed into arrays ready for Database
5. An SQLite database was implemented on the phone
6. Graphing specific time ranges was included on the application
7. Hardware all the parts were placed in finalized locations and soldered on

Pending Issues:

1. Application needs to be cleaned up for bugs / figured out as to why it crashes on specific uses

2. Compression shirt was lacking in giving appropriate data. The conductive fabric needed to be padded and cushioned for a proper data reading

3. PCB and Battery solution for the hardware team (continued)

4. A new cleaner Compression shirt needed to be sewed together.

Planning:

i. Getting the design for the PCB finished.
ii. Assembling the Third prototype. (Working with compression shirts)

iii. Software Team needs to clean up the application and test for bugs
iv. Second compression shirt needed to be sewed together.
v. Cushions for the conductive fabric needed to be created.
vi. Holders (Fabric pouches / velcro/ wiremanagement) and placement for all the hardware needed to be created.
vii. Preparing for our next meeting with Ted and Jeremias

viii. Documentation and Poster

Individual Contributions

Aaron : -- (13 hr)

i. meetings
ii. Battery Solution

William: -- (20 hr)

i. Weekly Report
ii. Meetings
iii. Parsing
iv. Sewing Compression shirts

Josh: -- (20.5 hr)

i. Meetings
ii. Cleaning up the application
iii. SQLite database
iv. Working with hardware

Nick P: -- (14 hrs)

i. Meetings
ii. Android Graph API

Nick G: -- (21 hr)

i. Meeting
ii. Testing hardware and software components together

Total Contribution for the Project:

Aaron Reyes (84.7 hrs)
William Park (97 hrs)
Josh Cline (119.7 hrs)
Nick Plutt (98 hrs)
Nick Gonner(103.1 hrs)