

EE / CprE / SE 491 – sdmay19-01

Athlete Motion Tracking

Week 8 Report

11/8/18 – 11/15/18

Client: Nathan Johnson

Faculty Advisor: Craig Rupp

Team Members:

Nathan Mazarelo — *Weekly Reporter/Software Developer*

Monte Friestad — *Spokesperson/Software Developer*

Madeline Rogers — *Meeting Facilitator/Hardware Maintainer*

Ryan Hansen — *Scribe/Hardware Maintainer*

Weekly Summary

This week our team decided on what cameras were going to be bought to replace the Kinects, began researching camera cases and cooling materials, and made improvements to the motion tracking program and web application. In our motion tracking program, we added the ability to change the speed that the lines move to track the points. In our web application we implemented the side by side layout to increase the accessibility of comparing past sessions.

Past Week Accomplishments

- Researched camera cooling and updated design document – Ryan
 - Camera cooling
 - Researched enclosures and possible fans to use for cooling if needed
 - Enclosures might be needed to encase the fans
 - Design Document
 - Changed and updated portions of the design document
 - Found how to export tracking data into a text file and then export into excel

- Revised and edited the Design Document and researched camera cases – Maddie
 - Design Document
 - Specifically worked with the TA that made revisions to understand areas for further improvement.
 - Will begin work on the final revision of the Project Plan
 - Began research on the different types of camera cases
 - Started creating designs for enclosure of the cases
 - Looked into the different types of materials and procurement for the camera cases

- Researched different web libraries and updated motion program - Nathan
 - Web libraries to put python program onto web app
 - Looked into different libraries that can convert the plots to embeddable code onto web app
 - Some libraries allow for the for the program to be overlaid with potential video
 - Updated motion tracking program
 - Removed excess points and only tracked the main moving point
 - Changed the speed at which the lines track the points

- Continued work with the web app – Monte
 - Layout
 - Made layout changes to make reading data easier
 - User can see the multiples sessions at once to be able to compare the different data sets
 - Implemented the side by side view that our client suggested in the last meeting

Individual Contributions

| Team Member | Contribution | Weekly Hours | Total Hours |
|-----------------|--|--------------|-------------|
| Ryan Hansen | Researched different camera cooling methods and updated the design document. Found a way to export data from software to excel. | 7 | 52 |
| Madeline Rogers | Revised and edited the design document and researched the materials needed to make a case to enclose the cameras. | 7 | 55 |
| Nathan Mazarelo | Researched different libraries to transfer python program to web app. Updated motion program to track one point and remove the excess. Changed the speed of the lines that track the points. | 7 | 54 |
| Monte Friestad | Continued updating the web application. Implemented the side by side view that was discussed in the last meeting. Made comparing the data easier by transitioning the layout. | 7 | 52 |

Plans for Coming Week

- Ryan

- Continue work on getting data to export from txt file to excel with the upgraded cameras
- Maddie
 - Will began work on the final presentation and continue finding case for cameras
- Nathan
 - After receiving data from the upgraded cameras, apply it to current program to test for issues
- Monte
 - Make improvements to layout of the website and add more data fields