

## **Week 4**

*Tuesday* – After CS461 we proof read each other's problem statements to assess who had a better presentation of the problem. We all had the same information in our problem statement.

Chase stitched together points from all three of our problem statements. I read it over modifying the sentences to be fluid when read, and Jared cited sources.

*Wednesday* – Chase and I met with our client Brett from Karate Health to refine and specifications for the problem statement with what they as a company are looking for.

*Thursday* – Chase and I attended the OSU AI club meeting to ask questions and gather feedback.

### **Problems:**

I would say the main problem we have is schedule conflicts. For instance I work 24 hours a week, I am in 2 group projects and have other deadlines to meet. On average this week alone I am obtaining 5 hours of sleep. I see this being an problem with no easy solution that will plague me and many others.

### **Plans:**

I plan to continue meeting with the AI club on Thursdays, when my classes allow, to mine for useful information. I also plan to continue researching similar problems of image classification to see what others have done to solve their similar problems.

## **Week 5**

### **Progress:**

*Monday* - All three of us met up to begin drafting our road map, created a list of bullet points that need to be addressed, and divided up the points to be addressed among ourselves.

*Tuesday* - We met up after class and begin to work on our bullet points.

*Wednesday* - Continued to work on our points.

*Thursday* - Finished our points began to work on proof read.

*Weekend* - Document will be reviewed *by our client*.

### **Problems:**

This week's problems are mostly revolving around other classes, making it difficult to meet up and work on our requirements.

**Plans:**

I will probably be reducing my work hours and dropping a class to make more time for research on our project. Will decide by next Thursday.

**Week 6**

**Progress:**

*Monday* - Chase and I met up to finish the road map document.

*Tuesday* - Chase and I met up to draft out plans for who would research what topic for our tech document. I began reading research papers that night too. I will be focusing on hyperparameter optimization and network architectures.

*Wednesday* - I started reading and writing about genetic algorithms and gradient hyperparameter optimization.

*Thursday* - Started reading document about network architectures. Finished writing the tech document.

*Friday* - Looking over the tech document fixing syntax errors before submission.

*Weekend* - Continue research possibly play with some artificial networks on GitHub.

**Problems:**

Again this week the problems were mostly time related. Furthermore, After researching optimization and network options I am thinking this project is less likely to achieve what the client is hoping to obtain. I don't think there will be enough inference in the data set we are to be given to solve the problem requested.

**Plans:**

I have have withdrawn from the class that is eating a majority of my time. I will still be going to that class, but I will no longer have to spend hours a day studying for it. This will open up my schedule next week to focus more on the problem we are trying to solve.

**Week 7**

**Progress:**

*Monday* - Continued to work on revising my tech document for Tuesday's peer review.

*Tuesday* - Two individuals peer reviewed my tech document. This gave me valuable feed back on how I should be preceding with my information. I also peer reviewed there documents.

*Wednesday* - *Revised the gradient decent section of my tech document.*

*Thursday* - *Revised the hyperparameters section of my tech document.*

*Friday* - Meet with Christopher for our weekly meeting.

*Weekend* - I have been watching Stanford's online lectures about AI and deep learning. I will continue to do that this weekend.

### **Problems:**

It has been difficult to describe the perfect artificial network architecture without actually playing around the a network.

### **Plans:**

I plan to continue to watch the previously mentioned Stanford video's to help fill in missing information.

## **Week 8**

### **Progress:**

*Monday* - Watched the 3rd machine learning video from Stanford.

*Tuesday* - Started reviewing a SVM tutorial and reading how those are constructed.

*Wednesday* - *started reading a blog referenced from the SVM tutorial on linear regression using gradient decent.*

*Thursday* - *Went to the AI club and listened to their weekly presentations. One I found very interesting was a group of researcher used a recurrent neural network to tune a convolution neural networks hyperparameters and found it to outperform human tuning of these hyperparameter.*

*Friday* - Meet wit our client at 6 o'clock we discussed focusing more on image processing using openCV to guarantee a deliverable product. We also discussed the FDAs recently released application called MyStudies. This was just released on November 6th and is open source modules for application development that manually take care of the "legal stuff", I quote that because I don't know much about legality to medical things.

*Weekend* - I will be trailing most of this weekend but I will be able to focuses more on my homework and research this weekend and next. I took work off all of next week to go visit family. This visiting family also means there will be vary little to do, so I should be able to look into openCV for image processing and hopefully play with some code.

**Problems:**

After meeting with our client it sounds like we will be scrapping the web app we were planing on making for an application that uses the FDAs MyStduies modules. They also want us to put the neural network work last and focus on image processing for now. I'm not sure if this means we will need to rewrite our previous documents?

**Plans:**

I plan to lean how to use openCV, and will continue to watch the Stanford videos. I also will be trying to learn the numpy library more.

**Week 9****Progress:**

*Monday* - Did not work on anything during this day.

*Tuesday* - Watched a lecture video on OpenCV.

*Wednesday* - Did not work on anything during this day.

*Thursday* - Started playing around with some openCV code for fecal detection. Began looking into training an openCV cascade classifier for identifying hands.

*Friday* - Haven't heard back from any of my members on a good time to start working on the Design Document. I will begin writing this today.

*Weekend* - Will be travailing back to Corvallis tomorrow. But will be trying to find a time to meet with the group to work on the design document.

**Problems:**

The only problem I have right now is time. With the end of the term comping other classes are demanding more time be spent preparing for their final tests.

**Plans:**

I plan to start working on the Design document today and setting up a structure for my project update video.