

Philip Tallo

Senior Design

## Part A

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### What was your individual contribution to this project? What did you do and how did you do it?

I architected the front end React-App almost entirely by myself as well as give each of my other group members a more in depth tutorial on how to develop a React App. We did a good amount of pair programming on the front-end which allowed me to help my group mates get a good understanding of how to develop a React App.

Also since I had a good hand in developing the front end application, I had quite the big input on designing the interface of API for our Flask backend. As the API and the front-end interact quite a lot we needed to work together to design this API interfaces so that they would interact well together.

Also I pair programmed with my group members who were much more experienced in developing a machine learning model so that I could get a better understanding of this component as well.

### Did you apply and build upon the skills identified in your initial assessment from last Fall?

The main competency that I identified that I wanted to build in the fall was **the ability to develop a machine learning model**.

### What did you learn and what competencies did you build?

The way that I developed this competency was by pair programming with Kyle O'Connor a decent amount in order to be able to learn to apply the concepts of machine learning programming in python with Tensorflow and Keras.

### What were your successes, what were your obstacles?

I think we had great success in both designing the front-end and the backend. I was able to pass in a lot of experience on developing a front-end application to my group mates. On the backend we were able to experience great collaboration between the database design, model design and flask web application design.

I think some of the obstacles we had were specifically in developing and training the model. As we have talked about a lot during this project developing a machine learning model to predict stock trends is a known hard problem. We did a lot of research on known state-of-the-art methods and put some of them into practice but it was a rocky road.

## Part B

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### What did your group accomplish?

We accomplished building a Web application using Python's Flask framework to develop the backend REST API and ReactJS in order to develop our front-end application. We also were able to develop several machine learning models using Python's well known Tensorflow/Keras machine learning framework.

## **What did you learn about group work?**

I learned that a key to good group work is to have make sure that everyone knows which tasks they are responsible for. This way if they are clearly defined then everyone can work somewhat independently but still collaborate effectively.

## **What aspects of teamwork were successful and what aspects of teamwork were not successful?**

One aspect of teamwork which was successful was that we were able to have everyone learn a lot about many different technologies.

One aspect of teamwork which wasn't successful was that during remote work because of the quarantine we found it rather difficult to collaborate and share ideas effectively. This is because several of us were in different areas from each other.

## **How did your effort on the project compare to that of your teammates?**

I feel that we all put a lot of time into this project and it is hard to say if one person really put in more or less effort than anyone else on this project. Matt worked heavily on our database and any video editing that we needed done. Chris worked with Matt on the database and helped develop our Flask backend. Kyle worked a lot on the model and helped integrate it into the backend. Also, I developed the frontend and worked with my group to integrate that with the API.

## **Do any team members deserve special recognition?**

I feel that all my group members did a great job.