

My contributions to the project started in the planning phase. As the member of the team with the most experience with data science, I was able to help with determining what we would be able to do with regards to text processing and user relationship analysis. This gave us the initial scope for our project, and allowed us to plan the features and schedule for the rest of the project. After determining the scope, we were able to find data sets that would fit our needs. We were able to find a data set that included numerous text samples from various users for our text analysis needs, and a data set with a large quantity of highly detailed user accounts for our user analysis needs. However, one of the data sets took longer than expected to be delivered to us, and we were unable to do as much testing on it as we would have liked.

I also accomplished a significant amount in the data science and software development areas of the project. I did significant research on the various methods and techniques used for analysis of both text and user accounts. Once we found suitable methods of data analysis, work began on implementing them into our program. I worked on implementing our algorithms in Python, reading data from a database and computing the links between users. As I was implementing the analysis server, I regularly tested it by running it on a small synthetic data set. This allowed me to easily tell how well our program was doing, by seeing if it detected the example targets we put in. After the analysis server was complete, we began attempting to get it to automatically read and process information from our database, however it was more complicated than we anticipated to integrate gRPC into the program, so we reduced the scope to only have it read static versions of the database manually.

In addition to my technical skills, I also utilized many communication, collaboration, and teamwork skills. One example of this was when developing the analysis server, one teammate acquired the data set for testing, another implemented the graph data structure, and I wrote the algorithm to analyze the data and organize it in a graph. Our group spent numerous hours working together in order to assure that we were all aware of what was being done, and that we could work on different parts of the same system in parallel. This allowed us to be much more productive, as we were able to give various parts to the most appropriate person, but not have to wait on others to finish their part. It also resulted in equal effort being put in from all members during these meetings.

One thing I learned in regards to teamwork is that it is extremely important to know your teammates' skills, and plan the project features around what skills can work with each other. Our project had some ideas that individuals were familiar with, but would be difficult for others to work with. For this reason, we had to scale some of our ideas back in order to produce something that we could work together on better. Another thing we learned was not to rely too much on one person, as a third party that we were working with took much longer than expected to deliver the data set we needed. If this had been a core system component rather than something for testing, our project would likely have been significantly delayed. For future projects, it would be advisable to set a strict schedule and ensure that everyone knows when their parts are due.