University of Toronto SCS: Module 20 – Final Project Assessment (Talbot, Amy)

Part 1: Self-Assessment

At the beginning of the project, I was tasked with creating a simple machine learning model. I identified the most appropriate model by understanding the type of data the team was using and looking at the rationale of using different models, and with the selected model I outlined how the training and testing would be completed using the 70/30 split, where 70% of our data would be used for training and the remaining 30% would be used for testing the model's accuracy.

I was then assigned to upscale the project database by ensuring the database integrated fully and that there was adequate interfacing with the project. I also connected SQL and Python using SQLAlchemy.

For the latter of the project, I was tasked with testing work to ensure everything was running smoothly and efficiently, as well as adding any final touches on the dashboard and presentation. I completed this by ensuring the coding was readable and adhered to coding standards, as well as fixed any bugs identified when proof-reading the code.

Additional contributions I made during the project was assisting in the mock-up of the database near the beginning of the project. This made the most sense, and the simple machine learning model outline played heavily on the type of data, and ensuring the database was effective for the chosen model was crucial.

My greatest personal challenge throughout the entirety of the project was picking up where someone left off when going from segment. Often times my colleagues would go about addressing items in ways that were slightly different to the way I would do it, causing difficulty when trying to continue on from someone else's work. The way I overcame this struggle was effective communication when switching off to a different role as we moved from segment to segment. Ensuring that I was on the same page and understood the direction that my team member was going made the transition much easier.

Part 2: Team Assessment

The communication protocol of the team included zoom meetings on Saturdays and Sundays (in addition to the Monday and Wednesday classes) which was sufficient and ensuring adequate collaboration, however presented the challenge of addressing questions outside of those scheduled meeting times. To address this our team created a slack group where we could ask questions between meetings and receive responses from any and all team members in a timely manner. This led to one of our greatest strengths as a team—effective communication, particularly when it came to needing additional support (ie. not being afraid to ask for help on your part) and I feel because of this the team's collaboration was above average.

Part 3: Summary of Project

The topic of this project was hesitancy to the COVID-19 vaccine and how it relates to sociodemographic data. As the target variables were identified, a supervised regression model was most appropriate for our datasets. Overall, our analysis concluded that although impactful, vaccine hesitancy is complex and the factors that influence the hesitancy rates are not limited to those that are sociodemographic. Ultimately, investigating larger datasets with additional feature inputs would potentially result in identifying more impactful factors.