**Module 20 Individual Self-Assessment**

For the Final Project of the UCB Bootcamp, we performed the Instacart study on its Products and Customers and help answer some questions such as –

* Top products offered,
* Lowest performing products
* Active customers by age, income, etc.

This will help Instacart and its vendors to boost sales and overall revenue. Machine learning models such as Deep learning Neural Networks was used for predicting Product Reordering probabilities and K-Means algorithms for Product and Customer Segmentation. We achieved an accuracy of ~70.5% with the models trying to predict Product Reordering probabilities and could successfully cluster Customers and Products into 4 groups for further analysis.

As a team member, I was involved with the team in finding a topic that we were interested to work together on and finalizing datasets for the decided topic at hand. As the project progressed, we distributed our work amongst ourselves and I was responsible for the Machine Learning model for Product analysis. The challenging part for me was to get the Machine Learning model to perform with an accuracy greater than 70%, given the size and complexity of the datasets. I discussed these challenges with the team and used some of their points which helped me to clean some data points and fine tune the model using additional layers and activation functions.

It was a great learning experience working with the team as I had not connected with some of them before during the course duration. We are a group of 5 team members, so understanding everyone’s expectations from the project and managing everyone’s schedules was hard, but we were patient and understanding towards each other’s issues. We made sure we helped each other out in case any team member had any conflicts or needed help with something. We mostly communicated via Slack, Zoom and group text and was usually easy to get in touch with everyone. There had been instances when a team member was stuck at work so we would either reschedule or send out the meeting minutes to the team member for him/her to catch up. I can say that I was lucky to have worked with the team where everyone was co-operative and open to suggestions from one another. There had been some compromises along the way but all project decisions were taken with agreement with the group members.