**DSC 630 – Predictive Analytics**

**Project Milestone# 1**

The project for this course will be done as team. Team members and communication plan details are provided below.

**Project Team:**

1. Nitin Mahajan
2. Ganesh Kale

**Communication Method:**

* MS Teams app will be used for team communication.

**Planning Basis:**

Team will work together to identify the problem statement and brainstorm to finalize the project scope. Team will collaborate regularly (or twice a week) on Teams to discuss each phase and milestone of the project and peer review the completed work done by each team member for each milestone.

**Task of Each Team Member:**

* Discuss the next stage and come up with new idea to complete milestone work.
* Discuss on work distribution
* Complete peer review and provide feedback
* Incorporate the review comments
* Complete the required documentation

Team will use **CRISP-DM** methodology to complete the project.

* **Business Understanding** – Team will collaborate to identify the problem statement based on the business domain to tackle using predictive analytics. Each team member will gather information about business problem and gain expertise on it. Team will discuss and finalize the technology used to complete this project such which language, tools, ML or Deep Learning Models etc. Each team member will perform research on data sources that would help resolve business problem.
* **Data Understanding** – Based on data resources identified in previous phase of project, team will start gathering the information about data and actual data. Team will collect the data and store into shared folder. Team will load the data, clean-up data and perform high level exploratory analysis on this collected data. Team will brainstorm on finalizing the data if needed will collect more data that would resolve business problem.
* **Data Preparation** – In this phase team will make sure data is cleaned by following all the steps of data preparation such as identify and handle missing, duplicate values, change the formats, and transform the data, convert data, or create new features based on existing features. Team will make data ready format that can be used for deep learning or ML model
* **Modeling** – Team will collaborate to identify which model is best suitable for tackling the busing problem. The finalized model will be evaluated on the cleaned data set and model will be assessed for accuracy and other metrics. Based on the assessment result team will change or update hyperparameters of the model or bring more data and train the model.
* **Evaluation** – Based on final model training result, team will test the model on test data and evaluate results for accuracy. Team will review the model result and make sure it is helping o tackle the business problem stated in initial phase of the project.

Team will review the entire phases of the project before concluding it and create project document explaining each phase such as , problem statement, technical details, outcome and references used.