**CSE523 Machine Learning**

**Prof. Mehul Raval**

**Analyzing TCP Network Packets**

**Week 1 Report**

| **Name** | **Enrolment Number** |
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Tasks Performed this week:

Dataset: <https://www.kaggle.com/datasets/jsrojas/ip-network-traffic-flows-labeled-with-87-apps>

* Network prediction analysis is a process of analyzing TCP data packets in order to make predictions about network behaviour. This can help network administrators identify potential issues and take proactive measures to prevent problems.
* ARIMA is a traditional statistical model commonly used for time series forecasting. In machine learning, ARIMA is a simple form of supervised learning where the goal is to predict a target variable (Computer Network behaviour) based on historical data. The model is trained on a dataset of past network behaviours, and the parameters of the model are optimised to minimize the prediction error.
* We have the data available that classifies the Network packets into 75 categories. We performed fundamental analysis to find the correlation between the variables on the dataset using numpy.

