**BANA 6630 – Time Series Forecasting**

**Final Project Proposal**

**Problem Statement**

The stock market is attracting more and more people's notice with its high challenging risks and high return over. A stock exchange market depicts savings and investments that are advantageous to increase the effectiveness of the national economy. The future stock returns have some predictive relationships with the publicly available information of present and historical stock market indices. We will be implementing Time-series based learning algorithms, for predicting changes in stock index prices of JK Tyres in short run, from historical time series data of quantitative factors that affect stock prices.

**Goal of the Project**

* To experiment with various Time Series Models and to evaluate performance of models in studying stock price patterns in time by attempting to predict future results of a time-series by simply studying patterns in the time-series of stock prices.
* Helping investors to decide best time to buy/sell/hold shares in stock market based on the prediction of our time series model.
* Giving an executive report of our analysis to company executives of JK Tyres about future market position of the company to assist in making future decisions about revenue distribution and investments .

**Data**

Weekly stock prices of JK Tyres from the first week of January 2009 to the last week of April 2020 are extracted from the Yahoo finance website. This data set contains the open, high, low, close and adjusted close prices of JK Tyres stock on every Monday throughout these 11 years. It also contains trading volume values on these days. To achieve consistency, the closing price will be used as a general measure of stock price of JK Tyres over these years

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