**Time Series Stock Analysis**

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**(Preliminary DRAFT – Work in progress)**

**Background**

Trading stocks in the stock market is a decision-based activity that relies heavily on current performance information and the prediction of future stock performance. Data is compiled daily for all active trading sessions Monday through Friday daily and yearly basis. Collected data consists of Opening Price, Lowest Price, Highest Price, Closing Price, Trading Volume and Stock Name. The information can be used for many reasons depending on the interest of all participants in the stock market.

**Objective**

The objective is to demonstrate the application of every key aspect of data analysis techniques working with Time Series Stock Data collected over a period of five years. The analysis provides answers to key performance index questions through classification using Neural Network and Deep Learning predictive algorithms.

**Question to which answers are offered**

* Trend - Is there an upward or downward trend?
* Pattern - Is there a pattern over a period of time?
* Seasonality or Stationality?

**Development Environment** Python Pandas Matplotlib Jupyter Notebook TensorFlow Data file (all\_stocks\_5yr.csv)

**Code Plan**

An outline of the code plan

**Summary**

Summarization of key performance metrics

**Visualization**

Graphical representation using 2D and 3D plots in Pandas matplotlib library.

**Risks**