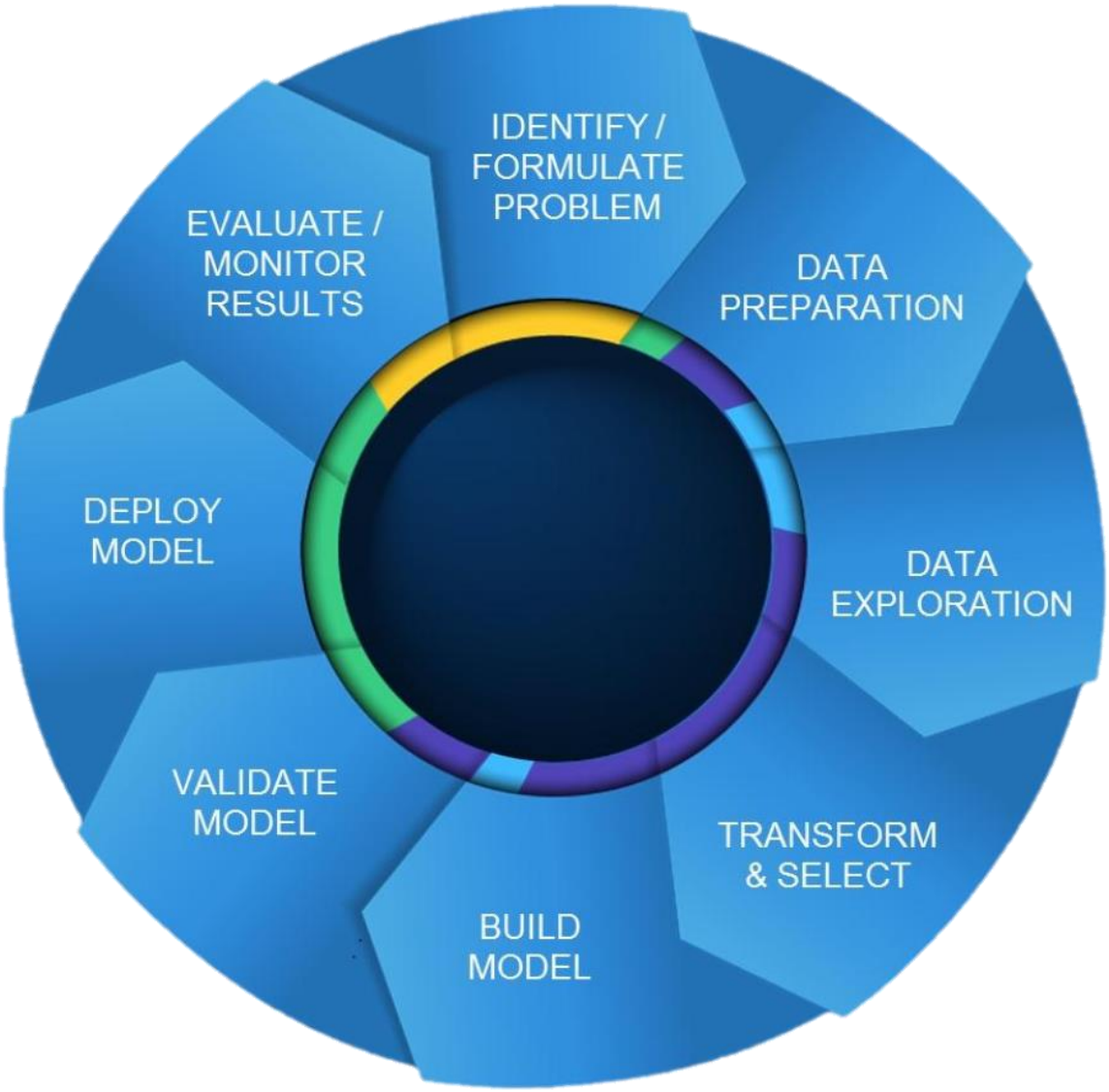
Project Blueprint:

Algorithmic Trending using LSTM Model for Intraday Stock Prediction



(Process Wheel)

Identify/Formulate Problem:

- Predicting the stock one-day performance by using LSTM model.

Data Preparation (Feature Engineering):

- Load the required python packages and libraries.
- Load the dataset.
- Finding the features like Open, Close, High, Low, Volumes
- Check for **nan**'s in the rows and either drop them or fill them with the mean of the column.

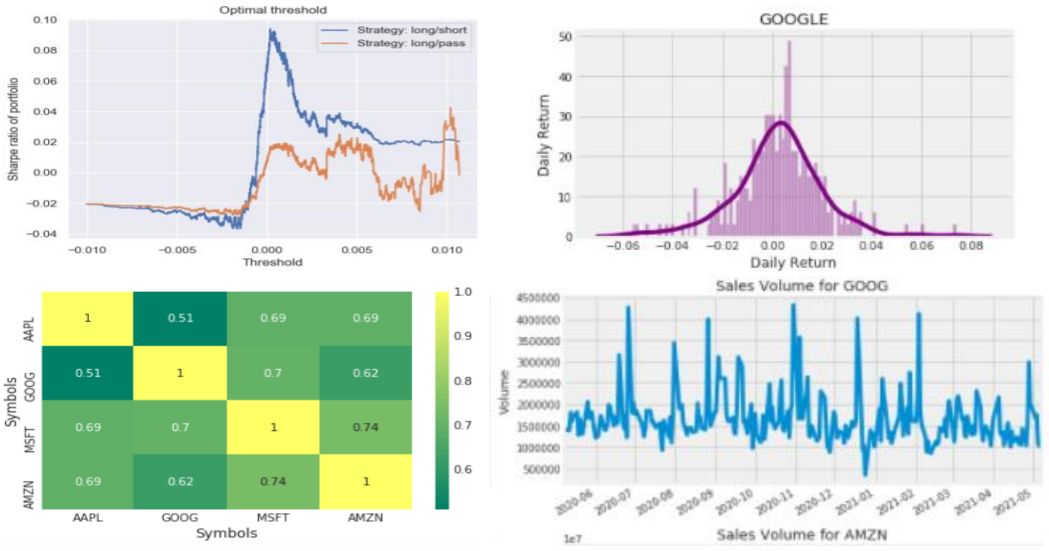
Data Exploration (EDA)

- Creating Descriptive statistics

1. Viewing the raw data.
2. Reviewing the dimensions of the dataset.
3. Reviewing the data types of attributes.
4. Summarizing the distribution, descriptive statistics, and relationship among the variables in the dataset.

- Data visualization by using matplotlib or seaborn.

Samples of EDA –



Transform & Select (Feature Selection):

- Transforming the data using the Standard Scaler or Minmax Scaler and Normalizing the data.
- $x\tilde{} = x - \min(x) / \max(x) - \min(x)$.
- And Selecting the variance (VAR/VARMAX).
- $yt = Xp\ i=1\ Aiyt-i + A0 + Bxt + Xq\ j=1\ Bj\ \varepsilon t-j + B0.$

Building the Model:

- Defining a model - Train-test-split (using Scikitlearn.preprocessing package).
- Compare the Models & Algorithms.

Evaluate model:

- Identify evaluation metrics – discriminating among model results.
- Model tuning – Bayes Optimization by polynomial regression.

Deploy Model:

- Finalizing and fitting the model in the test dataset.
- Finding Accuracy.

Evaluate / Monitor results:

- If Desired results is arrived, then Visualize it or If not arriving perform the process once again.