TIME SERIES ANALYSIS WITH PYTHON -FORECASTING STOCK PRICE

Introduction:

This form of analysis uses historical data to try to capture the trends that are within the data, this type of analysis is quite prevalent in the world of finance and sale & marketing I began to think about this application a week ago to take advantage of the powerful tools Python programming Language offers along with its wide range of libraries That Can be Used To analyze enormous amount of data to gain invaluable insights after developing and deploying machine learning models and algorithms which facilitate the prediction of future trends Without being explicitly programmed to do so.

Application Concept:

This application uses stock market data by applying ticker symbols , the user has the liberty to enter whatever ticker and he or she will get up to date data related to the stock as well as News and forecast the future price , the application relays on a Machine Learning algorithm called Facebook Prophet developed originally by META as well as streamlit library as a framework Within which the application is designed , streamlit is incredibly powerful and advantageous library that offers the possibility for data scientists and app developers to develop and deploy their Data science , Machine Learning and Computer Vision Application with ridiculous ease , the data in this app is scraped from yahoo finance website using yahoo finance library as well as pandas_ datareader To extract financial data instantaneously which can be used to analyze and capture historical trends and tap into models like Facebook Prophet , Prophet is used in many applications across Facebook for producing reliable forecasts for planning and goal setting. I've found it to perform better than any other approach in the majority of cases

Prophet is a procedure for forecasting time series data based on an additive model where non-linear trends are fit with yearly, weekly, and daily seasonality, plus holiday effects. It works best with time series that have strong seasonal effects and several seasons of historical data.

Prophet is robust to missing data and shifts in the trend, and typically handles outliers well. It works very much like Sklearn models where you train and deploy the model

Conclusion:

I would like to conclude by emphasizing the fact the Facebook Prophet as model cannot be used in all situations particularly when it comes to forecasting stock prices as there are Many intervening factors beyond the seasonality that are incredibly hard for the model to capture such as sudden changes in monetary policy by a central bank this might spook the markets And increase the volatility of stocks as stock markets are driven by sentiment and emotions which are intangible elements no model can capture in that sense forecasting future stock prices remains elusive and subject to Factors that are beyond any model to capture.

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LINK TO THE APPLICATION : CLICK HERE !

YOU CAN FIND THE CODE BY VISITING MY GITHUB ACCOUNT : CLICK HERE!

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