1.SOFTWARE DESCRIPTION

**1.1. Streamlit**

Streamlit is an open-source app framework in Python language. It helps us create web apps for data science and machine learning in a short time. It is compatible with major Python libraries such as scikit-learn, Keras, PyTorch, SymPy(latex), NumPy, pandas, Matplotlib etc. With Streamlit, no callbacks are needed since widgets are treated as variables. Data caching simplifies and speeds up computation pipelines. Streamlit watches for changes on updates of the linked Git repository and the application will be deployed automatically in the shared link. The platform uses python scripting, APIs, widgets, instant deployment, team collaboration tools, and application management solutions to help data scientists and machine learning engineers create python-based applications. Applications created using Streamlit range from applications capable of real time object detection, geographic data browsers, deep dream network debuggers, to face-GAN explorers.

1.2 Plotly

Plotly is a technical computing company headquartered in Montreal, Quebec, that develops online data analytics and visualization tools. Plotly provides online graphing, analytics, and statistics tools for individuals and collaboration, as well as scientific graphing for Python, R, MATLAB, Perl, Julia, Arduino, and REST. feasible when working on data science and machine learning problems in Python. Plotly enables Python users to create beautiful interactive web-based visualizations that can be displayed in Jupyter notebooks, saved to standalone HTML files, or served as part of pure Python-built web applications using Dash.

**1.3 IDLE**

IDLE is Python’s Integrated Development and Learning Environment. IDLE is completely coded in Python, using the tkinter GUI toolkit. It works mostly uniformly on Windows, Unix and macOS. It has a Python shell window (interactive interpreter) with colorizing of error messages, code input and code output. There is a multi- window text editor with multiple undo, Python colorizing, smart indent, call tips, auto completion, and other features. Searching within any window, replacing within editor windows and searching through multiple files is possible. It also has configuration, browsers and other dialogs as well.

**2.2.4. Fbprophet**

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. Prophet is used in many applications across Facebook for producing reliable forecasts for planning and goal setting. We’ve found it to perform better than any other approach in the majority of cases. We fit models in Stan so that you get forecasts in just a few seconds.

**2.2.5. Yahoo Finance(yfinance)**

yfinance is a popular open-source library developed by Ran Aroussi as a means to access the financial data available on Yahoo Finance. Yahoo Finance offers an excellent range of market data on stocks, bonds, currencies and cryptocurrencies. It also offers market news, reports and analysis and additionally options and fundamentals data- setting it apart from some of its competitors. To ensure backwards compatibility, fix-yahoo-finance now imports and uses yfinance anyway, but Ran Aroussi still recommends installing and use yfinance directly