

## User Manual

### Overview:

Our systems purpose is to use machine learning to predict stock market movements and give information to the user that will help them decide when and which companies to invest in.

### Hardware requirements:

Our system is very easy to run and is intended for all users on many platforms such as computers, mobile or tablets.

### How to use the software:

Our system is usable in any web browser. Currently our website is not on a server and must be downloaded locally to be used. Having our system run on a server is something we hope to achieve in the future.

[https://theuniversityofliverpool-my.sharepoint.com/:u:/g/personal/sgmblath\\_liverpool\\_ac\\_uk/EYyw5VLBYfxJirXcdg1MPfcB2J0s4sJxMv3mR5CtHUb4sA?e=NjQck5](https://theuniversityofliverpool-my.sharepoint.com/:u:/g/personal/sgmblath_liverpool_ac_uk/EYyw5VLBYfxJirXcdg1MPfcB2J0s4sJxMv3mR5CtHUb4sA?e=NjQck5)

To view this website, the file will need to be downloaded using the link above with a University of Liverpool registered account. After downloaded, the website can be viewed by unzipping the folder and opening the index.html file.

# Stock Price Prediction - User Manual

## Updating the ML models with new stocks

\*Make sure the file stock\_predict.py is open in a text editor/IDE of your choice before proceeding.

1. Download the stock data from Yahoo! Finance using the yfinance module. Here we have downloaded Apple stock data from the last 5 years using its ticker AAPL. We define the period we want to download on the line below. You can choose many different time periods. Please see yfinance documentation for more details.

```
18 AAPL = yf.Ticker("AAPL")
19 AAPL = AAPL.history(period="5y")
```

2. Call the LSTM function with the stock data and the name of the stock passed as parameters. This will save the model to the local directory so that it can be called later when the predictions are being made.

```
189 lstm(AAPL, "Apple")
```

3. Open the file uploadPredictions.py and add the new stock to the tickers and ticker\_names lists in the same format already given by the existing stocks. Now, when the function uploadPredictions() is called it will add the new stock and its data to Google Sheets so the front-end team can add it to the website.

```
6 tickers = [stock_predict.AAPL, stock_predict.AMZN, stock_predict.KO, stock_predict.NKE, stock_predict.GOOG]
9 ticker_names = ["Apple", "Amazon", "Coca-Cola", "Nike", "Google"]
```