Final Year Project – brief

What I have done:

* Researched traditional methods and indicators for predicting the stock market
  + Moving averages
  + Exponential smoothing
  + Arima (not a lot)
* Researched a range of model & methods for predicting time series (regression)
  + Random forest
  + Support vectors
  + Neural networks
    - One hidden layer
    - Two hidden layers
* Created Juypter notebook for each model
  + Takes apples stock from 2015-2023 as input
  + Sanitize and preprocess the data
  + Split data into training and testing groups
  + do a grid search to find the best hyper parameters for the model using MAE (mean absolute error)
  + Test the model on apple stock 01/01/2024 – 01/06/2024

Saved a few sources that have a good range of references I can explore

Possible Todo:

* Use different stocks
* Use different metrics to measure error
* Analyse and compare classification (Accuracy) (confusion matrix) (more important than accuracy)
* Expand inputs (feature engineering)
  + Moving averages
  + Indicators like (RSI)
  + Macroeconomic indicators (GDP growth, interest rates)
* Scrape web (reddit, X, the usual) and incorporate sentimental analysis
  + How to get data only available at time X?

Questions:

* Worried about scope – do I expand horizontally or vertically - Sentimental analysis could be quite complicated – do I have time?
* How much detail should I go into in the report about each method?
* Word count again (because I didn’t write it down)

Sources: