

What are the major components of your system? What are the inputs and outputs?

Inputs: stock pricing data from yahoo finance, bar chart, or alpha vantage

Outputs: buy and sell signals

- Where and how will the data be stored?
SQL database
- How will data get from one component of the system to another?
There is one database that contains the data and the model trained on it has access to the whole of the information in the database. There is not much movement of the data from one component to another.
- What is the lifecycle of your ML/DL model?
 - How frequently do you need to retrain your model? Is it at fixed intervals when you collect a certain amount of new data or when some other conditions are met?
New data could be collected daily and the model could be retrained daily. This is likely to be impractical, but quarterly collection/retraining would be far more realistic.
 - What kind of data do you need for retraining? How will you store and manage it?
Need stock pricing data (open, close, high, low). Might be able to incorporate data about the company (earnings, revenue, market cap, etc). Stored in a series of sql tables, listed by stock ticker and price date.
 - How do you know if the retrained model is good enough to deploy?
Train on one collection of stocks, apply to a different collection of stocks.
--OR--
Train up to 3-6 months prior to current date, verify on remaining data.
 - How will the retrained model be deployed?
On a single machine as a library
 - How will the retrained model be stored as an artifact?
Saved as a file that can be read into python.
- How will the system be monitored? How will you debug it if there are problems?
Regular checks against stock price movements (profit/loss evaluation)
- How will your system respond to unexpected errors or outages?
Not hosting in the cloud, so not sure how this applies.
- What are the specific tools/technologies you'll use to build this system?
Python via spyder, sql via python/sqlite, maybe tensorflow for DNN/RNN
- What is the estimated implementation cost in terms of resources, time, and money as applicable?
Personally owned laptop (avoids paying for cloud services). Hopefully no more than the next few weekends.