SWINBURNE UNIVERSITY

OF TECHNOLOGY

Task 1 Report

COS30018 Intelligent System

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1. Setting up the Environment

* IDE use: PyCharm Community
* Python version 3.12
* Requirements for v0.1 are
  + numpy
  + matplotlib
  + pandas
  + pandas-datareader
  + tensorflow
  + scikit-learn
  + yfinance
  + plotly
* Requirements for p1 are
  + numpy
  + matplotlib
  + pandas
  + tensorflow
  + scikit-learn
  + yahoo\_fin

1. Testing the provided code
   * This is the result I get from running the p1 code

A graph with red and blue lines

Description automatically generated

* For the v0.1
  + I am changing the company from CBA.AX to AAPL which is APPLE
  + Saving data that we have downloaded and prepared into a csv file so we can read from the file later
  + Saving the model to not wasting time running the epoch again

A graph showing the price of a stock market

Description automatically generated

Figure plotted by matplotlib as line graph

A graph on a screen

Description automatically generated

Figure plotted by plotly as candle stick graph

1. Understanding

The code from v0.1 is getting data of stock AAPL from yahoo finance from the date of 01/01/2020 to 01/08/2023 for the ai model train on how the stock price work. And then we fine tune the training data into a model that we use to predict price from 02/08/2023 to 09/08/2024 and the result is all good. In the end we use this model to predict the price of stock into the future which is then next day after 09/08/2024.

For p2, I tried to run the code which took a long time and I haven’t got a result yet  
A screen shot of a computer

Description automatically generated