Research Project Progress Report Week [6] – SIT723

Student Name:	Satvik Sharma
Supervisors' Names:	Prof. Maia Angelova
Project Title:	Financial Time Series Analysis with Machine Learning
SIT723 Target Grade:	Distinction
Overleaf Project Link:	https://www.overleaf.com/7593645898fsydrtqsdgzb
Project Folder Link:	https://deakin365.sharepoint.com/:f:/r/sites/SIT723-FinancialTimeSeriesAnalysiswithMachineLearning/Shared%20Documents/General/Satvik%20Sharma(218595095)?csf=1&web=1&e=0ayuEY
Worklog:	https://deakin365.sharepoint.com/:x:/r/sites/SIT723-FinancialTimeSeriesAnalysiswithMachineLearning/Shared%20Documents/General/Satvik%20Sharma(218595095)/Worklog.xlsx?d=w2cfbd3ab588d42f58966474ef14f85c2&csf=1&web=1&e=hp9uTj
Project Plan	
Summary of the work planned with your supervisor:	Development of machine learning model for the prediction of the stocks was the initial target. Most important methods were to develop the statistical models. The first one to develop was ARIMA for the predictions. It will be used to predict for six months of data and then evaluate how accurate the prediction is using RMSE and Absolute Error.

Summary of the work done:	The development of ARIMA was completed and the resulted prediction was not satisfactory and new and more reliable models were researched. The RMSE was 196.80 and the mean absolute error was 156.24, meaning there are more models that could predict lower RMSE and mean absolute error.
Next steps:	The next step is to research more machine learning algorithms and get a better predicting algorithm. Most importantly machine learning models like SARIMAX, GARCHA or maybe even Deep learning algorithms like LSTM will be used for prediction
Overall project progress:	Overall the progress of the project is going smoothly and by next week more of the machine learning models will be developed and the optimum model will be decided.