Research Project Progress Report Week [8] – SIT723

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| **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=HCtlhf> |
| **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=OLoN0n> |
| **Project Plan** | |
| **Summary of the work planned with your supervisor:** | Development of more machine learning algorithms and comparing them and finding out the most optimum one was the main target. Along with that, the overleaf template was to be completed. Along with it trying the machine learning algorithms on different stocks and finding if one ML algorithm was better for one stock and the other ML algorithm better for other stock. |
| **Summary of the work done:** | Throughout the week, four more machine learning algorithms namely Auto Regression, ARIMAX, SARIMA, and HWES. These were all the Statistical models and belong to the ARIMA family. Moreover, along with the Infosys stock, four more stocks were chosen, namely Maruti, Reliance, HDFC and ITC. The graphs of all the algorithms for the Infosys stock are shown below. Along with this, the overleaf was started. |
| **Next steps:** | Next step is to predict for the 1 year, 3 year and 5 years. Since, the year is 2022 and there is already data for 2 years, so it would be easier check the forecast of 1 year and the choosing the algorithm. Moreover, the completion towards the Overleaf article will also be going on throughout the next week. |
| **Overall project progress:** | Overall, the progress of the project is going smoothly and by next week overleaf and the optimum ML algorithms will be selected. |