

*Machine Learning Bootcamp - 2020*

**Team No. 1**

**Project 3**

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**Abstract Submission**

There is a fact that the stock market is controlled by many unpredictable factors. Those hidden factors can change by time, and they are not related to each other. Therefore, in order to predict the stock price more accurately, more advanced models should be used. This project is an advanced version of the previous project, focusing on using deep learning algorithms to solve the problem.

The dataset is the stock price history of Royal Dutch Shell in 2 recent years, 2019 and 2020. Similar to the last project, only close price is considered out of other prices which are available in the dataset. It will be a time series dataset where the current price depends on the previous price, which means when dividing the dataset into training set and test set, they should not be mixed but must be divided in a time order.

The proposed advanced method to predict the stock price in this project is Recurrent Neutral Network (RNN). RNN is recurrent in nature as it performs the same function for every input of data while the output of the current input depends on the past one computation. After producing the output, it is copied and sent back into the recurrent network. For making a decision, it considers the current input and the output that it has learned from the previous input. This model is expected to be more accurate than models used in the previous project.