ABSTRACT

Stock is a form of investment that is already considered familiar to the public. To get the maximum profit from shares in the form of dividends and capital gains, need some knowledge because the company's stock prices go up and down which is not easy to predict. Therefore, need a system that can help humans in giving consideration to take the right decision to minimize the risk that will be obtained. Machine learning is one system that can be used to predict closing prices of stocks so it can help to achieve this.

In this final project, a system is built to predict stock prices using the stock indicators themselves and technical analysis indicators using the Support Vector Regression (SVR) method. One of the advantages possessed by this method is that it can avoid cases of overfitting in the resulting model. So this method can produce a low error rate or produce a value of Mean Absolute Percentage Error (MAPE) which is quite small. But not everyone can use this system properly because its use is quite difficult, so this system is implemented into an Android-based application with Model, View, Presenter (MVP) architecture to make it easier for the users.

The data used in this thesis is historical data of five most active company stocks that obtained from yahoo.finance.com from January 2015 to December 2019. The results of this study indicate that the SVR method can be used to predict stocks with errors less than 18% both in systems that use the stock indicators themselves and technical analysis indicators. Based on the usability test, the interface of the prediction system android application can be said to be quite good, based on responses to questions raised that have a percentage of more than 86.7%.

Keyword: Stocks, Stocks Prediction, Machine Learning, Support Vector Regression, Android, MAPE.