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# Prediction of Dubai Financial Market Stocks Movement Using K-Nearest Neighbor and Support Vector Regression

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**Abstract :** The stock market is a representation of human behavior and psychology, such as fear, greed, and discipline. Those are manifested in the form of price movements during the trading sessions. Therefore, predicting the stock movement and prices is a challenging effort. However, those trading sessions produce a large amount of data that can be utilized to train an AI agent for the purpose of predicting the stock movement. Predicting the stock market price action will be advantageous. In this paper, the stock movement data of three DFM listed stocks are studied using historical price movements and technical indicators value and used to train an agent using KNN and SVM methods to predict the future price movement. MATLAB Toolbox and a simple script is written to process and classify the information and output the prediction. It will also compare the different learning methods and parameters s using metrics like RMSE, MAE, and $R^2$.

**Keywords :** KNN, ANN, style, SVM, stocks, technical indicators, RSI, MACD, moving averages, RMSE, MAE
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