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Stock Price Prediction Using K-Nearest Neighbor (kNN) Algorithm

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Abstract: Stock prices prediction is interesting and challenging research topic. Developed countries' economies are measured according to their power economy. Currently, stock markets are considered to be an illustrious trading field because in many cases it gives easy profits with low risk rate of return. Stock market with its huge and dynamic information sources is considered as a suitable environment for data mining and business researchers. In this paper, we applied k-nearest neighbor algorithm and non-linear regression approach in order to predict stock prices for a sample of six major companies listed on the Jordanian stock exchange to assist investors, management, decision makers, and users in making correct and informed investments decisions. According to the results, the kNN algorithm is robust with small error ratio; consequently the results were rational and also reasonable. In addition, depending on the actual stock prices data; the prediction results were close and almost parallel to actual stock prices.