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Theme

**The Application of Deep Learning Forecasting to
Algorithmic Trading**

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Abstract

Financial time series forecasting is a challenging problem at the intersection of finance and computer science. It is the most widely known subset of artificial intelligence for finance researchers in both academic field and the finance sector due to its widespread application areas and great impact. Researchers in machine learning have developed numerous models, and a great number of related studies have been published. Accordingly, there are a significant amount of publications covering machine learning studies on financial time series forecasting.

Recently, deep learning models have emerged in the sector, greatly outperforming the classical machine learning approaches. Therefore, the purpose of this project is to develop a trading strategy based on deep learning forecasting and then evaluate it in comparison to more standard trading strategies. The project entails making accurate price forecasts for some of the most well-known cryptocurrency pairings (BTCUSDT, ETHUSDT, BNBUSDT, and ADAUSDT), as well as developing a trading strategy that is based on these forecasts. The solution was implemented on a platform that had been constructed using the most advanced web technologies.

Keywords— Deep Learning, Machine Learning, Artificial Intelligence, Trading, Time Series, Technical Analysis, Financial Forecasting, LSTM, GRU, BiLSTM, BiGRU, BTCUSDT, ETHUSDT, BNBUSDT, ADAUSDT, Django, Django Rest Framework, NextJs, ReactJs, Docker, Kubernetes.