

# Risk Reduction by Stock Portfolio Selection using LSTM and K-means Clustering

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**Abstract:** *The stock market is very complex to understand. In the stock market, the stock prices keep fluctuating and it is tough to track the price of stocks. Most users find it difficult to choose the right stocks for their investment and there is a lot of confusion when selecting the right stocks in fear of losing your hard-earned money. In this paper, we discuss how to create a stock portfolio on the basis of stock prediction and then select multiple stocks using K-means clustering to reduce risk as per the profit. Many people aren't aware of price fluctuation and lose their money in specific stocks. This paper helps to understand the benefit of diversification of stock portfolios to reduce the risk of stock market fluctuations.*

**Keywords:** K-means, Clustering, Stock Market, Price Prediction, Pattern Matching

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