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For practitioners, decision-makers, and managers, this paper has ramifications. They can create a cluster trading strategy that enables them to establish a diversified portfolio using technical analysis with the use of K-means and technical analysis. This article outlines a step-by-step process for evaluating, clustering, choosing, and optimizing portfolios while taking risk and return into account. Engineers, managers, institutional investors, and retail investors can all use this method to choose the best stock portfolios and will profit from diversity in this study since it will help to shield an investor's portfolio from systematic risk, which could expose the portfolio to losses.

## Limitations and Future Works

In order to verify and validate the effectiveness of the suggested strategy, this research restricts the evaluation in using prior data. Future study may address return estimation using forecasting tools and approaches. Other evolutionary optimization techniques can be used in conjunction with Holt-Winters, neural networks, or other forecasting methodologies.

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## Biographies

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