

## ***Analysis and Implementaton Online Moving Average Reversion Strategy for Portfolio Weighting***

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### **Abstract**

One of the most important things investors do to reduce risk and calculate investment returns is stock selection for portfolio creation. Portfolio selection is a problem that often encountered in stock investment. This has attracted the attention of the machine learning community to develop a system that can select stock data and generate maximum returns. Therefore, we chose the “Online Portfolio Selection” algorithm for portfolio selection. However, portfolio selection requires stock market analysis that can safely detect stock trends. Empirically, moving averages are one way to determine trending stocks with good performance for large datasets. Of the many moving averages, we use Moving Average Reversion (MAR) because it can predict the next stock price. The combination of Moving Average Reversion which can predict future stock prices and portfolio selection algorithms using Online Portfolio Selection which can maximize returns, we call it Online Moving Average Reversion (OLMAR). From the results of our research, OLMAR provides excellent performance. In addition to generating high returns, OLMAR also works very quickly.

**Keywords:** *Portfolio Selection, Moving Average, OLMAR, MAR*

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