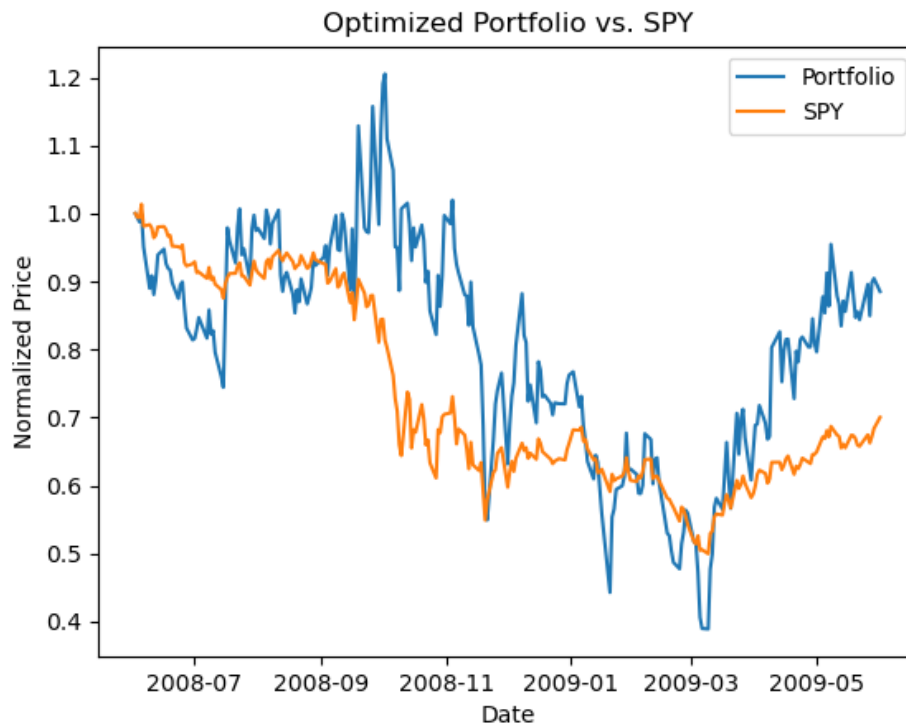


# Portfolio Optimization Report

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**Abstract**—This report presents optimizing a stock portfolio using the Sharpe Ratio and then compared to SPY, with chart illustrating performance

## 1 RESULTS



**Figure 1—Portfolio vs. SPY** — This chart compares the daily normalized performance of the SP 500 index (SPY) against an optimized portfolio consisting of IBM, X, GLD, and JPM. The portfolio's values are tracked over time to highlight differences from the market benchmark.

Key portfolio metrics:

- Cumulative Return: 25.0%
- Average Daily Return: 0.001
- Sharpe Ratio: 2.1