Summary Contribution

Introduction

This project exemplifies the effectiveness of team collaboration and specialization, with each member contributing their specific expertise to various facets of the research. The following sections outline the specific contributions made by each participant and identify the group coordinator.

Ascalone Sara

Sara Ascalone played a crucial role in the initial stages of the project, focusing on data preprocessing. Her responsibilities included:

- *Data Loading*: Importing data from CSV files into Pandas DataFrames.

- *Data Cleaning*: Ensuring data integrity by handling missing values, converting data types, and replacing commas with dots for numerical consistency.

- *Standardization*: Renaming columns to maintain uniformity across different datasets.

- *Correlation Analysis*: Calculating the correlation matrix to understand the relationships between different financial instruments.

- *Risk-Free Rate Calculation*: Incorporating the risk-free rate into the analysis to compute metrics such as the Sharpe and Sortino ratios.

De Col Emilio

Emilio De Col was instrumental in the more advanced analytical aspects of the project. His contributions included:

- *Data Collection*: Gathering comprehensive financial data from Bloomberg.

- *Markowitz Model Implementation*: Developing the code to create and optimize portfolios using the Markowitz model.

- *Rolling Window for Backtesting*: Implementing a rolling window approach to backtest the performance of the portfolios over time

Malamisura Federica

Federica Malamisura's contributions mirrored those of Ascalone Sara, focusing on data preprocessing. Her tasks included:

- *Data Loading*: Importing data into DataFrames.

- *Data Cleaning*: Ensuring the data was clean and consistent.

- *Standardization*: Renaming and formatting columns to standardize the dataset.

- *Correlation Analysis*: Performing correlation analysis to assess relationships between financial instruments.

- *Risk-Free Rate Calculation*: Calculating and applying the risk-free rate in the analysis.

Radice Jacopo

Jacopo Radice shared responsibilities with De Col Emilio in handling the analytical and optimization components of the project. His responsibilities were:

- *Data Collection*: Collecting financial data from Bloomberg.

- *Markowitz Model Implementation*: Coding the portfolio optimization using the Markowitz model.

- *Rolling Window for Backtesting*: Implementing the rolling window technique to evaluate portfolio performance over time.

Rossi Lisa

Lisa Rossi's role was similar to that of Ascalone Sara and Malamisura Federica, focusing on the foundational data tasks. Her responsibilities included:

- *Data Loading*: Loading data into DataFrames.

- *Data Cleaning*: Cleaning and preparing the data.

- *Standardization*: Standardizing the dataset by renaming and formatting columns.

- *Correlation Analysis*: Conducting correlation analysis of the financial instruments.

- *Risk-Free Rate Calculation*: Incorporating the risk-free rate into the calculations for various financial metrics.

Coordinator

Jacopo Radice has been identified as the coordinator of the group. Radice's leadership was evident throughout the project, as he effectively managed the work from both technical and management perspective.

Conclusion

In summary, the project was a collaborative effort with each team member leveraging their strengths in specific areas, ensuring a comprehensive and robust analysis. The coordination among the team members was key to the successful completion of the *"Portfolio Optimizazion BK.ipynb"* Python code project.