

The goal is to replicate the Russell 1000 Index's daily closing price every day (symbol ^RUI on Yahoo finance) during April 2019 using its 25 largest components (as of March 31st 2019). In other words, you are using the 25 largest stocks in the Russell 1000 to minimize the tracking error between your simulated index and the actual index. To construct this simulated index you can use as much data as you want up to March 31st 2019.

Please provide a report documenting your approach, data collection, how you constructed your model and why you chose it, and how you weighted the components in your simulated index. The report should include text and charts, including a graph plotting daily prices of the ^RUI's actual performance during April 2019 vs the simulated index you created and any relevant benchmarks.

Please do the exercise in python and list any modules you use at the top of the script. There are free online resources that can provide you with the stock data.

Please provide the report (max of 3 pages) and a python file (.py) with your code. Note that the python file does not count towards the 3 page maximum.

Feel free to use external resources like the internet. Make sure to define any terms or formulas such as tracking error.

I would suggest using the market weighted portfolio of 25 stocks as a benchmark and compare your approach to this benchmark. You may want to read online about how tracking error is usually measured.

The most important part of this is not the results but the decisions you make in this modelling exercise and the rationale behind those decisions. For example, if your tracking error isn't much lower than the benchmark, you can make up for it by exploring the reasons why this is occurring. This would be a suitable outcome given the limited time you have.