Algorithmic Trading (DS4F)

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Group Assignment

- A single digital document identifying all group elements must be submitted no later than **June 30, 2024**
- Group size from 1 to 5. You will organize your own groups.
- You are asked to submit the file(s) through Moodle or by email to dduarte@novaims.unl.pt.
- Accepted format will be jupyter (.ipynb), python script (.py) or excel
- Please comment all your answers

Year 2023 / 2024

1. **Choose a trading strategy and describe its rational**

2. **Fetch data for a period greater than 5 years for the asset or assets you intend to test**

3. **Write clear trading rules to generate signals for your trades**

4. **Choose and describe at least 3 performance measures used in the backtesting analysis with a short description of the results**

5. **Optimize and backtest your chosen strategy, leaving at least one full year out of the training data to test the strategy out of sample. Describe the target variable used to optimize and justify your choice**

6. **What would have been the P/L and the risk measures of the strategy during the backtest and out of sample? Comment the results**

7. **Choose two assets to build a pairs trading strategy. Perform an initial analysis to verify if the two assets are appropriate to be traded in this strategy and backtest your strategy explaining your assumptions and results.**

(Although the goal of any trading strategy is to make money, the PnL outcome will not be a factor for the grading)