

## **Project**

This project is designed to test candidate's problem solving capacity in a real-world situation using python.

### 1) Data download

<http://baostock.com/baostock/index.php/%E9%A6%96%E9%A1%B5>

Please download the index composition of CSI500 index at date = '2021-01-01'.

Tip1: Google translate add-on

Tip2:

<http://baostock.com/baostock/index.php/%E4%B8%AD%E8%AF%81500%E6%88%90%E5%88%86%E8%82%A1>

### 2) Download 30min bar data from 2022-04-01 to 2022-07-31 for all 500 stocks of the CSI500 index

Tip1:

<http://baostock.com/baostock/index.php/A%E8%82%A1K%E7%BA%BF%E6%95%B0%E6%8D%AE>

### 3) Design a mean-reverting strategy:

- We are trying to design a long only strategy where you hold a long position of 100 every day (constant notional) across the stocks that you think will rebound up.
- We are trying to do better than just buy and hold. We want to beat the 500 stocks equal-weighted.
- Design 3-5 features that would describe how much a stock is oversold or overbought
- Test the features from 2022-04-01 to 2022-06-30
- What would be your idea to improve the performance of the strategy?
- How you quantify how good is your strategy?
- Test the out-sample from 2022-07-01 to 2022-07-31

Requirements:

1) Send the project via github or textfile .py

2) If you use any third part package or library please include the lib install in the code as well

3) Explain clearly the objectif of each section of your code

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