Financial AI

Homework 6

Due at 06:00 pm (Korea Standard Time) on Saturday, November 5

Submit one file: written solutions with executable Python code

Problem 1. Udacity, Artificial Intelligence for Trading

Solve and Submit Term 1 - Lesson 21. Project 3 – Smart Beta and Portfolio Optimization.ipynb

Problem 2. Portfolios of 12-1 price momentum from Homework 4, Problem 3 and breakout strategy from Project 2 – Breakout Strategy.ipynb

(a) Use the momentum signal to construct a momentum portfolio that rebalances on the day you choose. The portfolio should be a long-short portfolio based on the signals. Use the weighting strategy freely.

(b) Return the weights, Sharpe Ratio, and Turnover for the portfolio in (a)

(c) Repeat the analysis in (a) – (b) with breakout strategy's long-short signal

Problem 3. LeetCode

(a) Solve and Submit LeetCode : 155. Min Stack (https://leetcode.com/problems/min-stack/)

(b) Solve and Submit LeetCode : 232. Implement Queue using Stacks (https://leetcode.com/problems/implement-queue-using-stacks/)

(c) Solve and Submit LeetCode : 150. Evaluate Reverse Polish Notation (https://leetcode.com/problems/evaluate-reverse-polish-notation/)