

Temple University, Department of Computer
Science
CIS 4360 Computational Methods in Finance
Fall 2023
Instructor: Dr. Alex Pang

Project 1

Student Name:

due date:

Overview

The goal of the first project is to reinforce and implement what you have learned in class related to technical analysis. In particular, you will implement a `Fetcher` class to download daily closing stock price using the Yahoo finance library. You will also create a technical analysis library based on pandas. Finally, you will develop a Jupyter notebook to call your library and illustrate how your code will be used.

The project will be done independently. I will provide code and notebook template as a starting point.

Tasks

1. Convert the logic in `yahoo.py` into object-oriented design where all the functions will be converted as methods under a class, say the `Fetcher` class. Download `Fetcher.py` as a starting point. The database connection object as well as the option object will be a private data member of the `Fetcher` class. Other than that, most of the code from `yahoo.py` can be re-used in the OOD.
2. Download `TA.py`. Fill in the missing code.
3. Download `TechnicalAnalysis.ipynb`. Answer questions in the notebook.

Checklist on what you need to turn in

Zip all of the following and submit them as a single zip file.

1. Your EquityDailyPrice sqlite database file
2. The python scripts, option.py, utils.py, TA.py
3. The TechnicalAnalysis.ipynb

Rubric

Your work will be graded based on Correctness, Completeness and Elegance.
Make sure your code has enough comments.