

sdmay19-06: Quantitative Research Modeling Library

Week 1 Report

January 21 - January 27

Client: Joseph Byrum

Advisor: Srikanta Tirthapura

Team MembersJosiah Anderson — *Meeting Facilitator*Doh Yun Kim — *Scribe*Gabriel Klein — *Report Manager*Drake Mossman — *Communication Manager*Nathan Schaffer — *Overseer*Jacob Richards — *Quality Assurance Manager*

Summary of Progress this Report

This week we began serious work on the pipeline again after refreshing from the last semester. We had several meetings with our client and ourselves to make our future plans concrete. We've split into three teams of two, each working a different portion of the pipeline: the models, the factor policy, and the interfaces. We will be able to work separately this way and then come together and integrate our work further down the line. We've also agreed to proceed with writing abstract classes for our client to use to write their own code in the pipeline. This way we will have a more significant codebase and reduce the amount of code rewriting they have to do in their scripts.

Past Week Accomplishments

Josiah Anderson

- Documented Factor Portfolio code using docstring conventions
- Reevaluated the direction of our project with Principal
- Read through input and output specifications provided by the client

Doh Yun Kim

- Talked with Vishnu about several functions in the modeling step
- Reviewed basic structure for abstract class for the modeling step

Gabriel Klein

- Merged last semester's work together
- Reassessed previous factor portfolio work direction and plans
- Solidified plans with Principal to standardize inputs/outputs between steps using abstract classes

Drake Mossman

- Facilitate communication about meeting plans
- Investigate better Python work environment

Jacob Richards

- Principal Meeting
- Looked over Principal Docs
- Worked on getting testing to work with CI

Nathan Schaffer:

- Meeting with Principal
 - Reviewed Principal DRP documentation
 - Emailed Fikri about factor policy and scoring stocks
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Pending Issues

We are currently having issues writing tests with our current codebase because our test scripts are in a different directory. Jacob will be looking for a fix to this issue this week. Other than that there are no pending issues.

Plans for Upcoming Reporting Period

Josiah Anderson

- Set up a meeting with Josh and Jacob to discuss the specifics of the interfaces and data storage
- Investigate the best way to set up a database on the EC2 instance
- Merge documented code with master

Doh Yun Kim

- Create the outline of the modeling step
- Schedule meeting with Vishnu to talk about modeling step in detail

Gabriel Klein

- Work on implementing ComputedFactors for factor portfolios
- Consider ideas for parallelizing factor portfolio code

Drake Mossman

- Establish workflow/communication plans with Nathan and Fikri
- Analyze any existing optimization work
- Begin constructing python ABCs for optimization

Jacob Richards

- Meet with Josh and Josiah to talk about next step
- Continue working on testing

Nathan Schaffer:

- Discuss future plans of the factor policy and scoring stocks sections of the pipeline with Drake and Fikri
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Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Josiah Anderson	Documentation, Meetings	7.5	88
Doh Yun Kim	Meetings, Modeling	6.5	77.5
Gabriel Klein	Merged Work, Factor Portfolios, Meetings	9	92
Drake Mossman	IDE investigation, Meeting planning	13.75	89.75
Nathan Schaffer	Meetings, Reviewing Docs	7	68
Jacob Richards	Testing, Reading Docs, Meetings	7	71.5