

sdmay19-06: Quantitative Research Modeling Library

Week 9 Report

November 10 - November 20

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

During this period we touched up our previous work on factor portfolio aggregation, continued the introductory work on the modeling step, and began to prepare for the final versions of our project documentation. The factor portfolio aggregation was augmented slightly and is now done as we understand it. The modeling step now has a framework of mocks and stubs built and is ready for more detailed implementation. We also now have a server ready to run continuous integration testing over all our commits. Finally, we began revising documentation such as deliverables, market survey, and testing.

Past Week Accomplishments

Josiah Anderson

- Brainstormed solutions to the model performance sections of the project pipeline
 - Calculating model performance
 - Comparing models to performance thresholds
 - Selecting portfolios at each period
- Looked more into documentation and standards for python development

Doh Yun Kim

- Integrated mocks and stubs into the modeling step
- Made changes to the R library to accommodate changed features

Gabriel Klein

- Added ability to specify preferred identifier for factor portfolios
- Solidified our planned deliverables
- Researched standards directly related to our project

Drake Mossman

- Update Project Plan for DRP 2.0 Pipeline
 - Further Research into Quantopian and caret
 - Description of related work

Jacob Richards

- Tried to get correct CI Runner on vm server
- Finished reviewing team code
- Looked into python testing frameworks

Nathan Schaffer:

- Reviewed team code
 - Adjusted Python package
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Pending Issues

There are no pending issues at this time.

Plans for Upcoming Reporting Period

Josiah Anderson

- Finalize Design doc and Project Plan
- Create and present a report on our progress
- Begin documenting current functions

Doh Yun Kim

- Polish the v3 of project plan and v2 of design document
- Prepare for final presentation
- Update gantt chart to show progress for this semester

Gabriel Klein

- Focus on the end of semester presentation and related material
 - Update documents with new work and plans
 - Add relevant documents/team info/other information to website
 - Refine presentation
- Prepare final versions of documents for Principal as move to the second half of the project

Drake Mossman

- Further Polishing of Project Plan as needed
- Updates to Design Document
 - Make changes to reflect DRP 2.0 design direction

Jacob Richards

- Get CI completely connected to vm server
 - Add needed variables to gitlab
- Start writing python tests

Nathan Schaffer:

- Prepare for end of semester presentation
 - Finish Design doc and Project plan
 - Update Python package
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Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Josiah Anderson	Model evaluation research/brainstorming	6	66.5
Doh Yun Kim	Modeling Step work	7	63
Gabriel Klein	Factor portfolio work, planned deliverables	5.5	70
Drake Mossman	Literature Review in Project Plan	7	67
Nathan Schaffer	Reviewed team code, Adjusted Python package	6	54
Jacob Richards	Review Code, attempted Runner installation on vm server.	6	57.5