

**sdmay19-06: Quantitative Research Modeling Library**

Week 4 Report

March 25 - March 31

Client: Joseph Byrum

Advisor: Srikanta Tirthapura

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

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**Summary of Progress this Report**

This week was our team's last week planned for integration work, and we were mostly able to finish integrating the pipeline as intended. Each section has been completed at a minimal viable state, and the inputs and outputs should match up as needed. The modeling and stock scoring sections still need to integrate with the database side of things, but that should be all the work that's left for the pipeline to be complete. We unfortunately had our team member in charge of setting up testing get sick this week, but we should still be able to move on to focus on testing and documentation as we finish up the last few weeks of the semester. We were able to do some initial benchmarking on the aggregation portion of the pipeline already, but we got some disappointing and rather slow results. We'll hopefully have time to revisit this section for some optimizations before the end of the project.

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**Past Week Accomplishments**

Josiah Anderson

- Communicated with Josh about interfacing with his dashboards
- Wrote a maintenance script to be used on the database
- Began making the views for the modeling and policy dashboards based on known information

Doh Yun Kim

- Optimized function to accept different sorts of models better
- Added the 'search' (name pending) function to decide how FP decide which models to run
- Started database connections

Gabriel Klein

- Finished implementing factor portfolio reuse by reading aggregated data from the database
- Benchmarked factor portfolio aggregation with and without reuse

Drake Mossman

- Integration and testing of Stock Scoring System
- Began investigation of how to store stock scoring inputs/output to database for traceability

Jacob Richards

- fp\_dataset\_mv changes in database
- Got sick

Nathan Schaffer:

- Packaged up all pipeline code
  - Documented weighted average stock scorer
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## Pending Issues

There are no new pending issues. Our client has yet to get the testing data we need back to us, but we've reminded them that we need that to ensure correctness for our results.

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## Plans for Upcoming Reporting Period

Josiah Anderson

- Test current views with Josh's dashboards
- Finish the rest of the views

Doh Yun Kim

- Start our final report
- Meet with Drake and Josiah to finalize integration
- Finish database connections

Gabriel Klein

- See what I can do about optimizing loading aggregated data from the database
- Switch to focusing on testing the aggregation portion of the pipeline

Drake Mossman

- Investigate current status and structure of traceability storage for Aggregation and Prediction
- Create schemas for Factor Policies, Stock Scores, and Stock Scoring inputs in database
- Update Stock Scoring code to put values into the traceability tables when run
- Possibly finish up documentation in Stock Scoring System code
- Review current state of Stock Scoring System with Fikri and hand off for internal implementation

Jacob Richards

- Finish materialized views
- Finish testing integration

Nathan Schaffer:

- Assist with testing pipeline
  - Adjust packaging if needed
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**Individual Contributions**

<b>Team Member</b>	<b>Contribution</b>	<b>Weekly Hours</b>	<b>Total Hours</b>
Josiah Anderson	Views, DB script	6	157.5
Doh Yun Kim	Modeling Database, integration	6	141.5
Gabriel Klein	Factor Portfolio Reuse, Benchmarking	9	164.5
Drake Mossman	Integration of Stock Scoring System	9	152.25
Nathan Schaffer	Packaged pipeline code, Documented code	6	125
Jacob Richards	Changed fp_dataset_mv, Got sick	½	121.75