# EE / CprE / SE 491 - sdmay19-07

# Real Estate Portfolio Optimization

# Weekly Report 11

Monday, January 28 – Sunday, February 3 Client: Principal Faculty Advisor: Chinmay Hegde

## **Team Members**

Blake Roberts - Project Manager / Backend Colton Goode - Meeting Scribe / Backend Kevin Johnson - Quality Control / Frontend Leelabari Fulbel - Meeting Facilitator / Frontend Nickolas Moeller - Report Manager / Backend

### Past Week Accomplishments

- Fixed connectivity issues with the frontend and backend Colton
  - Due to multiple merges and a rework of the backend, the frontend needed to be adjusted to compensate for the changes
  - Moved around functions to make them more reusable in the future
- Created new branch to embed Power BI test report into dash app
  - Got a test report embedded into the dash app using a link generated by the Power BI service. Still looking into how dashboards/reports can be generated dynamically and embedded into the dash app.
- Researched Dash standards and practices Nick
  - Compiled design practices that will be referenced when creating our data visualizations
  - Reference resource for our software architecture
- Started the look for user input Leelabari
  - Created "pages" for the two main pieces of user input (file and constraints)
- Added a Dockerfile Blake
  - Created a Dockerfile so our application can be run on any hardware architecture
- Added loading style during UI callback processing Blake
  - Before, the only thing that would change is the title of the page which might be hard to notice for application users. The added style makes page element loading obvious.
- Outlined a software architecture for the frontend Blake
  - We didn't have a standard way to implement new features on our frontend. By outlining what the structure of our application should look like, we can better parallelize our development efforts.

- Added the ability to upload a NCREIF market data file via the Dash app Blake
- Added the options for added new options for Markets and Property Types Leelabari
- Added delete buttons Leelabari

## **Individual Contributions**

Team Member	Contribution	Biweekly Hours	Total Hours
Blake Roberts	Added a Dockerfile to run our application on any platform. Added code to style web app pages while callbacks are processing. Outlined a software architecture for our frontend code. Added the ability to upload a NCREIF market data file via the Dash app.	6	70
Colton Goode	Reviewed code merge requests, reworked how the frontend code interacts with the markowitz calculations on the backend	6	72
Kevin Johnson	Created new branch to embed a test report in dash app	6	68
Leelabari Fulbel	Added the options for choosing constrainst. Also worked on deleting constraints	6	63
Nickolas Moeller	Reviewed code, researched Dash standards and practices	6	69

# Pending Issues

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# Plans for Coming Week

- Authentication with Power BI via REST API
- Uploading application user portfolios
- Markowitz Constraints UI implementation

### RASIC

R: Responsible

- The team member primarily responsible for the task's completion.

A: Approve

- The team member responsible for approving the task's completion.
- S: Supporting
  - The team member(s) who support the task's completion.

I: Informed

- The Principal team member(s) who are informed of decisions, progress, and completion associated with the task.
- C: Consulted
  - The Principal team member(s) who serve as Subject Matter Experts or key stakeholders for the task or project as a whole.

#### Past Week RASIC:

1/28/2019										
	Team Members						Principal Team			
Task	Blake	Cole	Kevin	Lee	Nick	Ben	Jonathan Ling	Jonathan Frank	Action	Notes
Embed Test Report into dash app		S	R							
UI Markowitz Constraints	S			R						Collecting constraints from the user and translating them into backend optimization engine constraint objects.
Research Dash best practices and form a frontend software system design	s				R					
Update frontend code to utilize Markowitz refactor		R								

#### Next Week RASIC:

Team Members Principal Team									
						Principal Team			
Task	Blake	Cole	Kevin	Lee	Nick	Ben	Jonathan Ling	Jonathan Frank	Action
Embed Test Report into dash app using REST API's		s	R						
UI Markowitz Constraints	s			R					
Power BI Python abilities					R				
Uploading a new portfolio	R								
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