EE / CprE / SE 491 – sdmay19-07 Real Estate Portfolio Optimization Week 4 Report

Monday, September 29 – Sunday, October 07

Client: Principal

Faculty Advisor: Chinmay Hegde

Team Members:

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

Weekly Summary

We continued to research Markowitz. We met with Principal Financial and discussed the theory and how to apply Markowitz with the data that was provided. We started implementing a first-pass Python script. We started building frontend mockups.

Past Week Accomplishments

- Meeting with client Everyone
- Research into portfolio optimization and modern portfolio theory (MPT) Everyone
- Made data migration and api python scripts for test data Blake
- Research useful libraries in Python useful for data analytics Blake
- Excel concept Nick
- Frontend Design for Portfolio Management Page
- Frontend Design sketches for Base Page and Options pages Kevin

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Blake Roberts	Basic Markowitz implementation in Python	6	18
Colton Goode	Markowitz optimization in Python, testing current algorithms	6	17
Kevin Johnson	Starting creating mockups for frontend side of application	6	16
Leelabari Fulbel	Starting creating mockups for frontend side of application	6	6
Nickolas Moeller	ckolas Moeller Built proof-of-concept using Excel and continued learning Python		17

Pending Issues

- Limited understanding of project requirements and constraints
- Lack of implementation knowledge on MPT optimization

Plans for Coming Week

- Continue research into MPT (Specifically Markowitz) Everyone
- Research into Real Estate Investment: Terms and concepts, strategies, players involved, environment, etc.
- Gather UI requirements and constraints

10/1/2018										
Task	Team Members					Principal Team				
	Blake	Cole	Kevin	Lee	Nick	Ben	Jonathan Ling	Jonathan Frank	Action	Notes
New DS for expected return		R	8	5			5			1 time period for now
New DS for covariance	R				R		5			1 time period for now
Utilize DS's for Markowitz for one time period					R		s			1 time period for now
Share python code	4		8			R				
Mid-point presentation				R					In DSM, one hour, around 4th week of october (come up with a couple times)	
included markowitz understanding in weekly update			R							