Heilmeier Questions

5) If you're successful, what difference and impact will it make, and how do you measure them (e.g., via user studies, experiments, ground truth data, etc.)?

Geo-Spatial visualization will help users gain insights into construction and real estate trends. This tool will help city/authorities make data-driven decisions for infrastructure, sustainable living planning. For, construction companies, this can serve as a great way to visualize how trends have changed over time.

The tool adoption can be assessed by measuring the traffic to the web page. This can be automated with tools like Google Analytics. For specific use cases for enterprises, user surveys can be conducted to prove the hypothesis/assumptions about the tool.

6) What are the risks and payoffs?

Risks: Data cleaning can get complex and time consuming.  
Geo-Spatial visualization using 3rd party libraries can become risky if they don’t support what we are intending to build.  
Scope of the project might get huge given the amount of time we spend on homeworks.

Payoffs: The ability for retail users to make sound financial decisions.  
City/Town planning can use this tool for data driven decisions vs anecdotal instincts.

7) How much will it cost?

Resource Cost (10 hrs/person/week) = 50 hrs/wk \* 8 weeks = 400 resource hours  
Storage Cost - Tier 2 Data Lake = 1$/month   
Computation Cost – 24.7$/Month (using AWS ec2 pricing of 0.0139/hr)  
Miscellaneous – 1% of the overall cost.

8) How long will it take?

7 weeks for project to be completed, 1 week for presentation prep.

9) What are the midterm and final "exams" to check for success? How will progress be measured?

Following are the check-points to track project:

03/26/2021 – Data clean up and storage  
04/09/2021 – POC for working choropleth visualization with fixed data  
04/23/2021 – Final Working Tool with end-to-end data.  
05/01/2021 – Wrap up, final presentation with a virtual launch party ☺.