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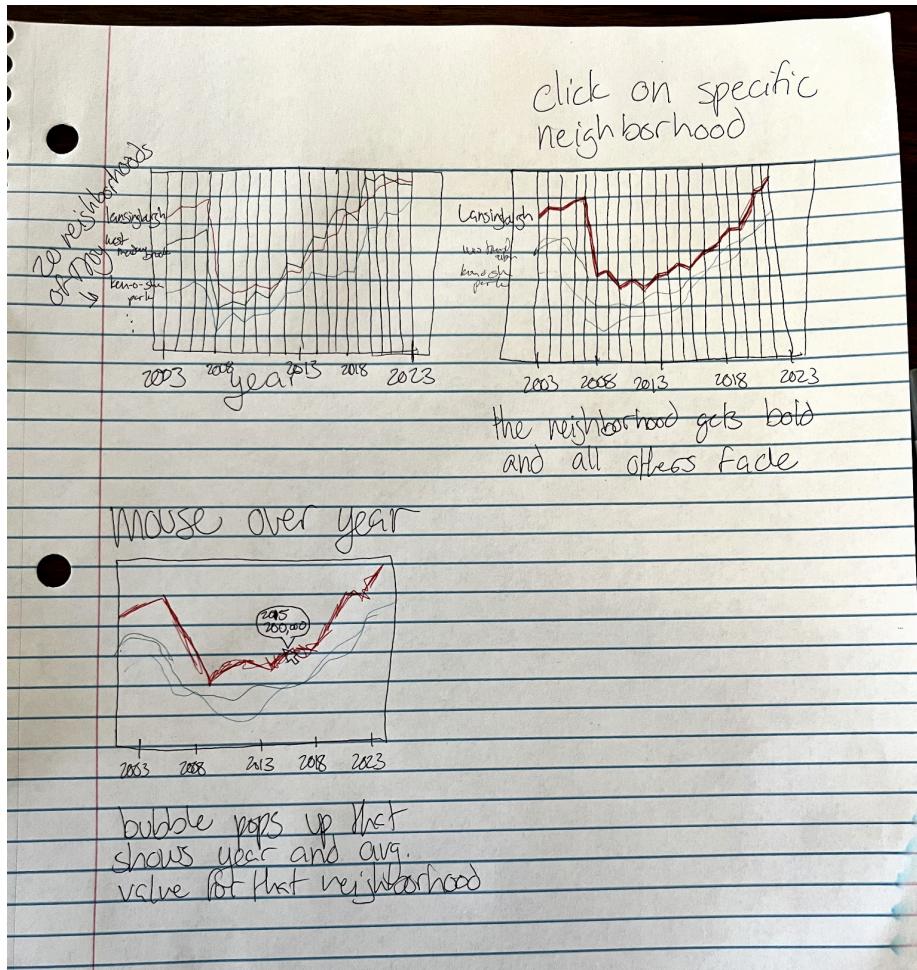
Final Project Proposal

Central Research question: How have real estate values for the average value of single family homes changed in different neighborhoods of Troy over the past 20 years?

Hypothesis: Our hypothesis would be that the values in the Troy area have followed a similar trend to that of the average US real estate prices. The location isn't as unique as something such as Naples or Sarasatoa in Florida who have seen prices double in the past 5 or so years. Our assumption is that the real estate values have, in general, gone up (one may say significantly) due to numerous factors. Considering we are starting from 20 years ago, we will see a steep decline in 2008, and booms such as the one in 2020. We also are focusing on single-family homes as that is a fair way to gauge the generality of real estate.

Target Audience: Our target audience includes anyone interested in the real estate value of Troy. This includes people who live/want to live in Troy, real estate investors, local governments etc.

Storyboard:



Tasks/Timeline:

- Data gathering and understanding- done in class 3/12
- Parse/process the data with python scripts - 3/18
- Bare-bones graph - 3/22
- Fully complete parallel coordinates graph - 3/25
- Add interactivity component - 4/1

If time is available:

- Make a map of Troy version with diverging color scheme - reach goal
- Expand to cities/states - reach goal

Each part of the project will be contributed equally throughout. We plan to meet in person throughout the entire process.

Risks and Limitations:

A risk could be making the map of Troy neighborhoods. We're not sure as of right now how to make a map of the neighborhoods. There are already provided templates of states and countries to visualize, but scaling it down to one city such as Troy might be difficult to find.

Technical References:

<https://journalofbigdata.springeropen.com/articles/10.1186/s40537-021-00476-0>

This paper discusses big data analytics and prediction on real estate market. This could potentially be used for us to predict neighborhood prices down the line. It also explores variables like time on market (TOM), initial price setup, and location, and their effects on property prices.

https://www.researchgate.net/publication/365339524_Improving_online_Real_Estate_Management_System_using_data_analytics

This paper emphasizes the importance of data analytics in creating efficient online real estate management systems, especially in developing countries where access to reliable real estate data can be challenging

Discussion Forum Feedback:

From both our discussion posts we have one reply pertaining to the real estate idea. Considering this is what we will be going to pursue, I will be summarizing that post by Ronnakorn R. His post was significantly helpful as it provided us a strong question to answer: what type of housing market are we looking towards? After looking through the data example provided in the reply we have decided to narrow down our location into the Troy neighborhoods and single family homes. The data we downloaded comes in monthly, but due to the length we are looking to visualize, we may need to re-adjust the data into 6-month or yearly values.