Student Project Summaries

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Background

Problem Statement:

PSRC (Puget Sound Regional Council) travel survey will be cross-referenced with Seattle public transit (bus) data to understand how well the current systems accommodate the needs of Seattle residents

Goal:

Want to create interactive maps that would allow for easy access and analysis of how well public transport matches the actual transport trends, as well as understand socioeconomic factors of individuals surveyed and how they are affected differently by current transit trends

Data

Two major data resources

- Puget census tract data, publically available
  - Obtained and organized transit trends and socioeconomic factors by zip code

- KCM public transit data, publically available
  - Obtained location of bus stops and bus routes

Limitation of the data

- Large datasets where we only need a smaller subset of the data
- Dealing with shapefiles
- Needed to add latitude and longitude for individual zip codes for mapping

Use Cases

Point-and-Click interactive map on a webpage

- User clicks on a zip code location, and the software groups the data associated
- Displays bus routes that serve that zip code
- Displays PSRC transportation trends for that zip code
- Generate socioeconomic and demographic analysis based on zip code

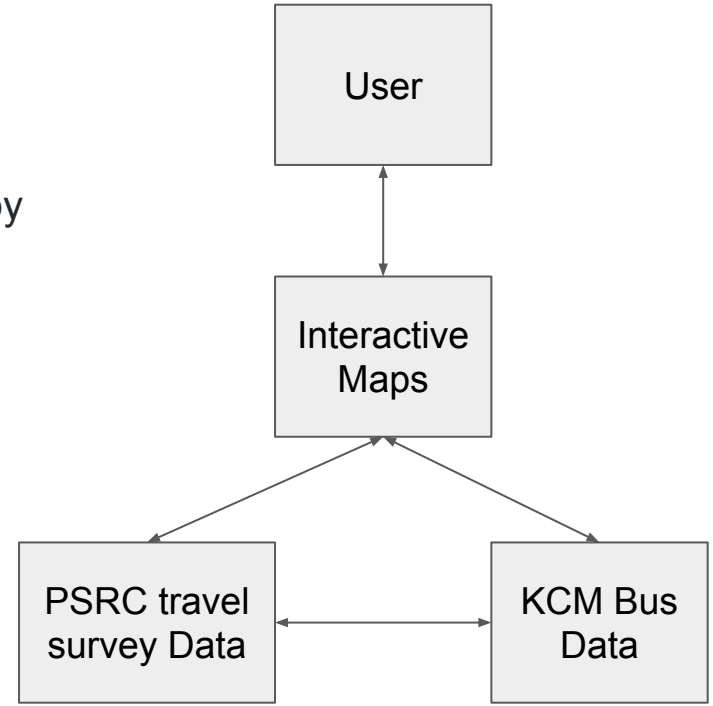
Report Summary

- A file will be auto-created with the results of the analysis
    - This will include datasets, maps, and plots in a reader-friendly format

Design

Component list

- Database of public transportation routes and stops by location
- Database of socioeconomic and trips by location
- Map of routes and stops
- Visualization of socioeconomic data through charts and heatmap



Lessons Learned & Future Works

- Polishing the interactive visualization
- Importance of version control for efficient coding
- Importance of commenting so that your peers can easily understand your code
- Working on converting the jupyter notebook file into python format
- Creating tests
- Organizing the Project Structure

Demo & Project Structure

file:///C:/Users/Liam/Downloads/socio%20(1).html