Nearby

1. Background

Before you move to a new place, it would be useful to know the neighborhood, and it would be wonderful if most of the desired information can be aggregated and found in just one website.

2. Requirements (85 points)

In web development, a mashup extracts content from different sources, aggregates the content, and displays enriched results. In this project, you develop a mashup web application that uses a location, such as an address, as input, combines information from different free sources, and displays various results which may include but are not limited the following.

- What amenities (such as restaurants, grocery stores, superstores, fitness centers, banks, parks, schools, universities, libraries, post office, etc.) are nearby the particular location? What are their distances to the location and their ratings and reviews if applicable?
- How convenient is this location to major public transportations, such as distances to nearby highways, subway or train stations, airports, etc.?
- How safe is this area, such as crime-related information?
- What is the weather in the next few days and year around?
- What nearby properties are currently on the market for sale and what are their attributes, such as numbers of bedroom and bathroom, sizes of living space, lot sizes, listing prices, years built, distances to the given location, etc.
- What nearby properties are currently on the market for rent and what are their attributes, such as numbers of bedroom and bathroom, sizes of living space, rental rates, distances to the given location, etc.

The following further clarifies the requirements for the project.

- You decide what free data sources and what data to use. However, the access to the data must be free. If a website offers a limited time (such as 30 days) free trial, and charges a fee afterwards, this is not a free source and do not use it in your project.
- If a data source requires you to create a free account in order to access its data, you can use the data source.
- If a data source provides free but limited access, such as less than 1000 visits per day, this is ok to use the data source.
- In order for users to better understand the data (including longitudinal data), you choose appropriate ways, such as tables, graphs, pictures, and maps, to display the results.
- If a data source disallows users to store its data in a local database or data files, then do not store its data locally.
- You choose your preferred technologies to implement the project.

- The score of a project is mainly determined by the mashup's usefulness (which can be measured by features provided) and user experience (which can be measured by ease of use and the visual design).

3. Deliverables

- **Important Dates**
  - By 5 PM PST of April 21, 2017 - Each team either turns in a working machine (including the documentation) or sets up a working machine which is provided by the organizer.
  - April 29, 2017 - Oral presentation and demonstration to the panel of judges.

- **Documentation (5 points)**
  - README file enumerates data sources and data used, explains features of the mashup, describes the system architecture/design and the technologies used, and shows how different programs interact. If a database is used, this document also explains the database design and shows how tables are related. Also include procedures for how to setup and install the mashup application.

- **Oral Presentation and Response to Questions (10 points)**
  - List data sources and data used, review the features, describe the system architecture/design and the technologies used, and explain how different programs interact.
  - If a database is used, explain the database design and show how tables are related.
  - Demonstrate your mashup application and answer questions.