

Stage 1: Detailed Project Description

1 Describe what data is stored in the database. (Where is the data from, what attributes and information would be stored?)

Restaurant data scraped from google maps.

Restaurant (restaurantId, restaurant_name, contact_phone, average_price, view_number, avg_rating, cuisine)

Location (locatId, detailed address, street, city, state, zip_code)

Reviewer (reviewerId, name)

Review (reviewerId, rating, comment, data)

Food (foodId, name, restaurantId, price)

User(userId, password, email)

2 What are the basic functions of your web application? (What can users of this website do? Which simple and complex features are there?)

1. Default Presets List:

There are two default preset lists. The first one contains all the information related to the restaurant, and the second one contains all the information related to the food. You can switch through the buttons at the top of the page. This preset list provides an example result so that it's easier for new users to use this website.

2. Secondary List:

For the restaurant list, an interactive button is set for the name of the restaurant. When the user clicks the restaurant name, he or she can enter a new page, with the introduction of the restaurant at the top and a sub list below, which contains all the food information of the restaurant. The same operation can be performed as the parent list.

Not only the sub list of food, users can click the button to switch to the comment list. In the comment list, you could set more detailed categories, including positive, negative and neutral comments. We hope that we can sort by comment time and filter out useless comments according to certain rules.

By the way, we also considered setting a button that could jump to the map website and support the guidance.

3. Filter and sort:

For every list, you could filter by some attributes such as review, favorable rating, city (or street, state) or average price. Multiple filters and sort could occur at the same time. For example, we could select a street, and then sort all the restaurants on this street according to the price.

4. Search:

For every list, whether preset list or not, when users search, they can automatically retrieve the place and filter out the data list.

5. User Preferences:

For the preset list, users can change the default attributes in the settings. For example, users can delete the ratings section if they only care about certain attributes such as the price.

6. Comparison:

For the restaurant list, users can choose any two restaurants and compare open time, location, average price, average rating and other things directly. This helps users to make decisions when they hesitate on choosing between two similar restaurants.

7. User's favorite:

Users can star the restaurants they. When the starred restaurants satisfy the search criteria, they will popped up to the star of return result. This helps users reduce the frequency of searching for their favorite restaurants.

3 What would be a good creative component (function) that can improve the functionality of your application? (What is something cool that you want to include? How are you planning to achieve it?)

We can add additional features such as the type of restaurant and the average price of the restaurant, so users could better decide which restaurant to go to. For restaurant types, we will extract keywords from the food in the restaurant and add them to the entity of the restaurant. As for average price, we will calculate the price of food in the restaurant.

Search function. Sometimes we want to eat certain kinds of restaurants or food. Use the search function to quickly filter restaurants or food. We will implement this function through a search bar and keyword extraction technology.

More detailed screening capability. Sometimes we want to eat at a specific time, and general software cannot filter out this information. This function can be realized through like statements.

Even though Google Map provides good information about restaurants, it doesn't provide detailed information about the menu. Our website supports searching food list and they can also find the food menu of restaurants.

Compared with yelp, we have two unique and excellent functions.

First, we can provide "quick choice" service, which helps solve the "difficult choice". Yelp's search and filtering function will give us a lot of results. We have noticed that sometimes we spend too much time on existing shopping software and meal selection software, because we need to weigh and compare various factors. On the webpage we designed, users can choose fewer and better results or choose normal mode.

Secondly, the disadvantage of Yelp is that all its information comes from review, which is too complicated for search. Sometimes, when we search for a specific food, his retrieval system will provide us with some redundant items, because some other reviews also mention this food. On the website we designed, we can more accurately based on the food name.

4 Project Title: Robust Restaurant Selector

5 Project Summary: It should be a 1-2 paragraph description of what your project is.

Based on the database, our team designed a robust restaurant selector, which can provide more detailed restaurant or even food classification retrieval information, and present it in the form of a list to help customers make decisions. We plan to extract restaurant information from Champaign and Chicago on Google Maps and allows users to search for restaurants easily.

6 Description of an application of your choice. State as clearly as possible what you want to do. What problem do you want to solve, etc.?

With our website, we hope to search for restaurants/food more effectively.

We hope to integrate functions such as the search tool, filter tool, and ranking tool. That way, users of our website who have specific criteria of what foods they want to eat or go to restaurants that fulfills their criteria will be able to search efficiently. Users can also search for restaurants sorted based on average prices or ratings. Ultimately, we want to provide a lot of flexibility for users to search for restaurants without having to search multiple times to find a restaurant. This will allow users to save a lot of time with minimal number of clicks.

Sometimes, we especially want to eat Mexican food or Chinese food for example. We can select a food list on our website. First, we can filter it by region and street, and then search for specific keywords to get a complete and detailed food table.

We can make more convenient, fast and accurate choices based on the restaurant's evaluation and the prices.

7 Usefulness. Explain as clearly as possible why your chosen application is useful. Make sure to answer the following questions: Are there any similar websites/applications out there? If so, what are they, and how is yours different?

Although Google Maps can provide information about restaurants, there are some functions that are lacking and can be improved. For instance, if I would like to search for either Italian or Indian restaurants, I have to do the search twice on Google Maps, once for Italian and once for Indian. However, we want to create a website which can include both or even multiple cuisines which will be able to increase the efficacy of restaurant search for users.

Also, on Google Maps, we can filter for restaurants that open at a specific time and date. However, with our website, if I am interested in restaurants that open between 7 to 9 pm, I am able to use the filter function to search for such restaurants.

It can't get all the food information and create a list of food. It is possible that a restaurant with low evaluation has a food that is very suitable for customers.

As mentioned above, we also want to realize the search keyword function, which gives our website a greater advantage in helping customers choose restaurants.

8 Realness. Describe what your data is and where you will get it.

We will be extracting restaurant data from Google Maps API. Specifically, we will include restaurants from Champaign and Chicago. If we do not have sufficient restaurants, we will include restaurants from other parts of Illinois.

9 Description of the functionality that your website offers. This is where you talk about what the website delivers. Talk about how a user would interact with the application (i.e. things that one could create, delete, update, or search for). Read the requirements for stages 4 and 5 to see what other functionalities you want to provide to the users. You should include:

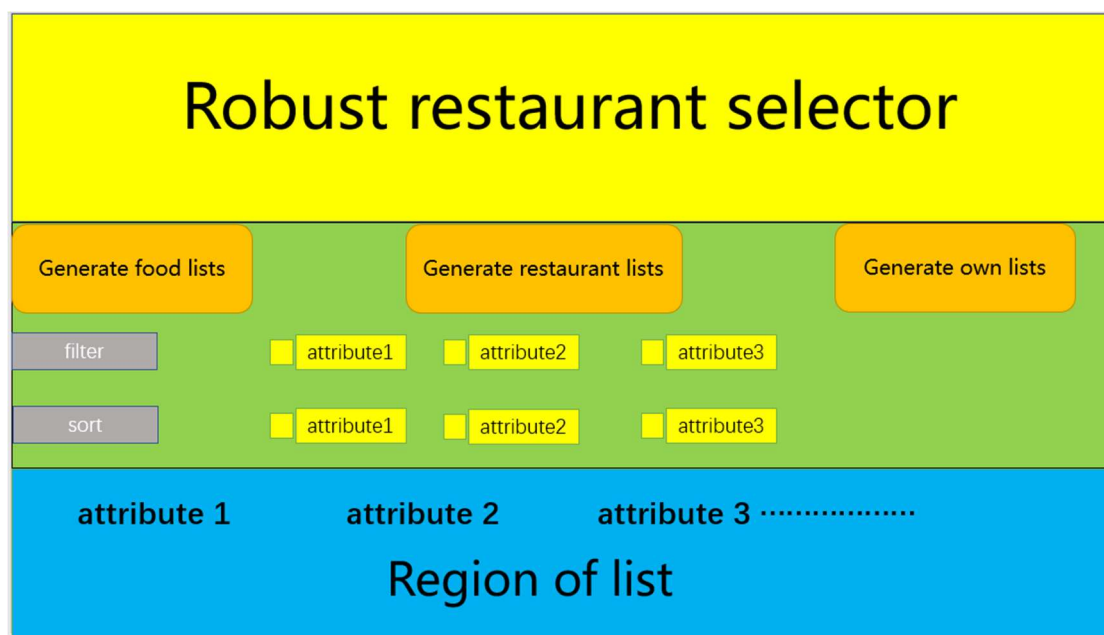
Generally, On the home page, the top is the title of the website, and the bottom is the filtering and sorting area, including the buttons for selecting food list or restaurant list, as well as the buttons for interactive filtering and sorting. The drop down list appears when we click on the buttons. There are 20 pieces of information on the list side, which can be paged.

If it is a restaurant list, click the name of the selected restaurant to enter a sub page, where you can view the food list and comment list through a toggle button, as well as the basic information and introduction of the restaurant. If it is a food list, click the selected food name to enter the restaurant.

In addition, the user can change the attributes appearing in the preset list in the settings. The developer could register some new information into the database.

More specific functionalities are already listed in section 2.

10 A low fidelity UI mockup: What do you imagine your final application's interface might look like? A PowerPoint slide or a pencil sketch on a piece of paper works!



11 Project work distribution: Who would be responsible for each of the tasks or subtasks?

List of the person responsible for which exact functionalities in section f. Explain how backend systems will be distributed across members. Be as specific as possible as this could be part of the final peer evaluation metrics.

Preliminary allocation, adjusted according to the actual workload

web:

Web page basic: Hanggang and Suhao

Web page interaction function: David Gutzwiller and Suhao

Design Page Layout: Ling Lee Chong

Collect Data and Import Web Page: David Gutzwiller

database:

Default Presets List: David Gutzwiller

Secondary List, Filter and sort: Suhao

Search, User Preferences: Ling Lee Chong

Comparison, User's Favorite: Hanggang Zhu