

# SI 507 Fall 2021

## Project Proposal

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Since this is my first semester in Ann Arbor, I am interested in knowing more about the local restaurant. So, I am planning to build a restaurant searching application based on information in Yelp, and maybe other platforms if necessary. My application should be able to find a certain kind of restaurant based on the user input. The information should include the name of the restaurant, the location information, the category, pricing level, open hours, rating, review count, and the URL of the restaurant.

#### **Data Source**

Yelp is the primary data source. I am going to use API to get the data from Yelp. The website is: [https://www.yelp.com/developers/documentation/v3/business\\_search](https://www.yelp.com/developers/documentation/v3/business_search). If it is necessary, I will use OpenTable as a secondary data source. The website is <https://www.opentable.com/>. The data from Yelp will be in JSON file. Data scrapping from Open table will be in csv file.

#### **Data Processing**

I am planning to use tree to structure the data. There are many attributes in the data source. The leaf of the tree is the restaurant information. The attribute node is the restaurant attribution. I will use a search algorithm to search the tree to get the data I need.

#### **Data Presentation**

1. I am going to use command line/shell to ask user input.
2. A map that used to present the location of the restaurants.
3. A chart used to show the ratings of the restaurants.
4. A table used to show the structured information