Audrey (Zixin) Li
An Nguyen
Hafsa Razi
Emily Zheng

Project - Cereal Killers

Goal of the Project

With all of the food options in Chicago, it can be hard to decide where to go on a given night. You're tired of going to your favorite spot, and you want to go somewhere new but similar. But digging through Yelp is a pain, and you don't have the time for that anyways. Our goal: to develop a Chicago restaurant generator modelled after Pandora, offering the user a recommendation based on previous restaurants visited. Factors will include cuisine type, meal types, locations, price ranges, reviews, and ambience. Our user will be offered a restaurant they have not visited before. Should they decide against it, our software will continue to offer choices until they are satisfied. The user will provide feedback following a restaurant visit to enhance future software usage.

Usage of Software (from the user's perspective)

Step 1: Fill out survey

Step 2: Enter specific requirements for this meal

Step 3: Generate a restaurant until recommendation is accepted

Step 4: Accept the recommendation!

Step 5: Users can modify the survey at any time

Source of the Data

We will utilize data from either Yelp or Opentable and pull the data directly from the website. We will restrict our project to Chicago sit-down style restaurants.

https://github.com/sosedoff/opentable

Data will include:

1. Restaurant name
2. Restaurant rating (out of 5 stars)
3. Cuisine type (ethnicity, meal style)
4. Location within Chicago (address)
5. Price point (rating system out of 3)
6. Reviews (to allow for search of specific keywords e.g. warm, kind staff, nice ambience etc.)
7. Phone Number

Work Required

Figure out the structure/usage of the software, determine the details, the data needed

Analyze different restaurant review websites to determine the data to use and scrape data into usable forms

Work on the data to match them to the structure of the software

1. Extract data from websites
2. Build index of restaurants to **qualities**

          i.   {"Restaurant Name": ["Cuisine Type", "Location", "Rating","Price"]}
3. User input form
      i. Where/what have you previously eaten and enjoyed? Qualities includes: cuisine type, location, ratings, price point, reviews
          1. The input is a list of restaurants, from which we can then extract **qualities** from the index built in 2. We use this information to create a personalized base dictionary for this user, which updates every time the user modifies survey responses and accepts our recommendation
      ii. What are you looking to try? (A list of cuisines, locations, price points, review keywords)
          1. The input is customized to each specific search and adds on to the basic dictionary generated in i)
4. Match user input with index
      i. Restrict main restaurant database based on user preferences (location range, price point, ratings, etc.), exclude previously visited or rejected restaurants
5. Generate restaurant recommendation

Timeline

Week 4: Structure of the software, pull relevant data from websites
Week 5: Building an index of restaurants to qualities (crawler)
Week 6 (Check-in): Continue previous week
Week 7: User input form, matching user input with index
Week 8 (Check-in): Continue previous week
Week 9: Testing, debugging, cleaning up the code
Week 10: Final Project Presentation
Finals Week: **March 14th at 5 pm**