

FOODECISIVE

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PROBLEM

- Choice Overload - when people have trouble deciding when faced with many options.
- According to the US Bureau of Labor Statistics, the time people spend on eating and drinking, and food preparation and cleanups are around an average of two hours per day.
- Average American couple spends 132 hours a year deciding what to eat.

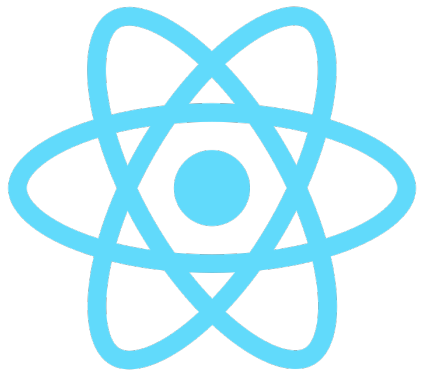
OBJECTIVE

- Effectively provide *list of restaurants* to users based on their preferences
 - Improved recommender system to consider additional preferences
 - Complemented with map containing pinned restaurants
- Give users the option to *view and save multiple lists*
 - Requires authentication
- *Interactive* website

TECHNOLOGIES



mongoDB®



Flask

yelp fusion

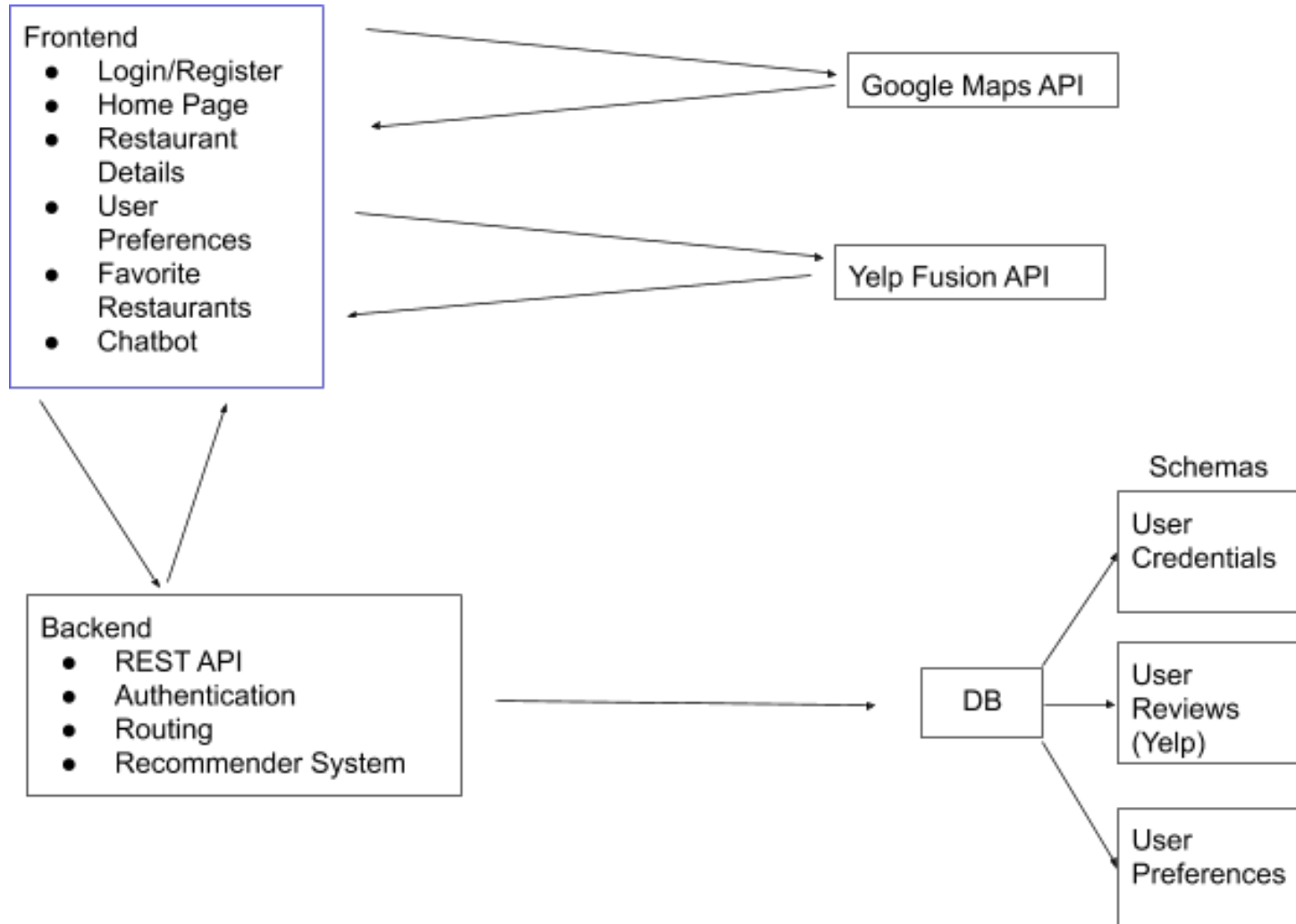
RELATED WORK

Wheel of Dinner (<https://wheeldecide.com/wheels/food-drink/wheel-of-dinner/>) - Basic implementation, does not take preferences into account.

Yelp (<https://www.yelp.com/>) - Uses effective collaborative filtering but can be improved.

TripAdvisor (<https://www.tripadvisor.com/>) - Similar to Yelp, however some useful preferences are missing. Restaurants are just one part of Yelp and TripAdvisor.

ARCHITECTURE



DESIGN (HOME PAGE)

- Register/Login Page and authenticate credentials
- Provide a search bar to search restaurants
- Provide a list of top-k recommended restaurants personalized to user
- Integrate Chatbot feature to request for restaurant information

About Food decisive

A significant flaw with people is that we tend to be incredibly indecisive. Food is one example. It may seem trivial, but choosing what to eat actually stumps more people than you may think. For instance, you are going out with a friend for dinner or on a date, you are too nervous about what makes the other happy so you could not think of a good option for both of you. Not knowing what to choose can lead you to an awkward scenario and you end up not happy with your meal.

Button

Popular restaurants

Photo of restaurants

Restaurant title 1

●●●●○ 100 reviews

American, Fried, Bar

Call Maps

Photo of restaurants

Restaurant title 1

●●●●○ 100 reviews

American, Fried, Bar

Call Maps

Photo of restaurants

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Call Maps

Photo of restaurants

Restaurant title 1

●●●●○ 100 reviews

American, Fried, Bar

Call Maps

Show more

Recommend restaurants base on your recent search

Photo of restaurants

Restaurant title 1

●●●●○ 100 reviews

American, Fried, Bar

Call Maps

Photo of restaurants

Restaurant title 1

●●●●○ 100 reviews

American, Fried, Bar

Call Maps

Photo of restaurants

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American, Fried, Bar

Call Maps

Photo of restaurants

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●●●●○ 100 reviews

American, Fried, Bar

Call Maps

Show more

Talk with a Chat bot agent

Hi, How might I help you?

Chat 

DESIGN (DETAIL PAGE)

- User should be able to enter their preferences
- Integrate Google Maps to provide directions to a given restaurant (shortest path)
- Should be able to view location, ratings, genre, contact info, covid-19 protocols

Search result: Restaurants near Fayetteville, AR

Your Preferences

Restaurants type

- EditText
- EditText
- EditText

Show more

Cuisine

- EditText
- EditText
- EditText

Show more

Price

- EditText
- EditText
- EditText

Show more

Dishes

- EditText
- EditText
- EditText

Show more

EditPreference

- EditText
- EditText
- EditText

Show more

Maps

Top Restaurants base on your preferences

Photo of restaurants

Restaurant title 1

●●●●○ 100 reviews

American, Fried, Bar

Call Maps

Show more

Top Restaurants base on your recent search

Photo of restaurants

Restaurant title 1

●●●●○ 100 reviews

American, Fried, Bar

Call Maps

Show more

Base on your favorites

Photo of restaurants

Restaurant title 1

●●●●○ 100 reviews

American, Fried, Bar

Call Maps

Show more

Past visits

Photo of restaurants

Restaurant title 1

●●●●○ 100 reviews

American, Fried, Bar

Call Maps

Show more

TASKS/SCHEDULE

Tasks	Dates
1. Research recommender systems and design sketches of UI	11/14-11/28
2. Create React Skeleton, setup basic views, setup backend and start preprocessing of Yelp data	11/28-1/11
3. Establish database schema and connectivity to backend and start recommender system development	1/11-1/25
4. Implement Home Page (Search Bar, Initial Restaurants recommended, Toolbar, Preferences page) and continue recommender system development	1/25-2/8
5. Implement User Auth and Login/Registration Page	2/8-2/22
6. Connect frontend and backend and test data retrieval from frontend	2/22-3/8
7. Implement the Chatbot and integrate Google Maps API	3/8-3/22
8. Test functionality of Recommender System given user preferences	3/22-4/5
9. Polish up frontend for aesthetic look	4/5-4/19

DELIVERABLES



Design Document: Explains what our code does...



UI drawings and flowcharts



Database schema and initial data



React and Flask code



Collaborative Filtering Recommender System code (Python)



Final Report



Research Paper (IF TIME PERMITS)