

Project Idea #2 Brewery “ROAD TRIP!!” planner

API Link: <https://api.openbrewerydb.org/>

Summary:

Creating a Road trip map for for people who love breweries. Data is sent in the form of JSON string. The user would select from a list of breweries inside of the desired range, then the algorithm would find the shortest possible path in between the selected locations. We would also allow for the user to sort the breweries into subsets that match their style such as pubs, breweries, cider houses, and so on.

The api for that we could use for this, that is listed above, is free.

When people find the brewery they want, I guess they have to eat something nearby as well. When they type in the types of food they want, they are offered a selection of great restaurants nearby.

When people come to a new place, they type in where they're from, and they come up with some good local restaurants of their hometown style based on some reviews, and they come up with some interesting local places.

Expanding:

- Implements shortest path (Dijkstra's Algorithm)
- Road conditions map into the algorithm
- Maybe: Uses weather API to get current weather at locations
- Uses Yelp API to show information about the place, as well as a few reviews.

Yelp API Link: <https://www.yelp.com/fusion>

→ Maybe: Uses Eventbrite API. Allows users to create and search for events around the places they are planning to go.

Link to API page: <https://www.eventbrite.com/platform/api>

Link to creating an event through API instructions:
<https://www.eventbrite.com/platform/docs/create-events>

Q/A

What is new/original about this idea?

Have you ever seen Dijkstra on a bar crawl? No?

What are related websites/apps? (Be able to answer the question: isn't somebody already doing this?)

Yelp, Eventbrite, pubtrally. There are similar apps, however, we have original ideas that will set ours from the rest. We would add road conditions and suggestions for other locations you might like.

Why is this idea worth doing?

It can be a hassle for people to find their favourite brewery and they spend a lot of time looking up information. This idea makes people's lives more convenient, and let people who love breweries find what they want more quickly and accurately.

Why is it useful and not boring?

It's useful as it simplifies the ability to bar-crawl your way across Oregon, without the need to use google maps' clunky UI. Dijkstra on a binge would only be Boring between Gresham and Kelso.

What are a few major features?

Our app would provide the user with planning out a road trip to various breweries, by finding the shortest path. Integrating other apps, such as Yelp, would allow more depth via reviews of nearby places to eat. You can't drink without some good burgers, right?

What resources will be required for you to complete this project that are not already included in the class. i.e. you already have the Microsoft stack, server, database so what else would you need? Additional API's, frameworks or platforms you'll need to use.

Yelp API, Eventbrite, Roads API, Imgur API

What algorithmic content is there in this project? i.e. what algorithm(s) will you have to develop or implement in order to do something central to your project idea? (Remember, this isn't just a software engineering course, it is your CS degree capstone course!)

In this project we would have to implement Dijkstra's Algorithm. We also would have to implement a "You might like this" algorithm that displays other locations that might be of interest based on the original choices for the crawl.

Rate the topic with a difficulty rating of 1-10. One being supremely easy to implement (not necessarily short though). Ten would require the best CS students using lots of what they learned in their CS degree, plus additional independent learning, to complete successfully.

6/10

Needs and Features

- (Primary core feature) This core feature will allow the user to pick brewery locations and create a pubcrawl between them, using the shortest possible route. Once a crawl is chosen, the route will be rendered to a google map display. Each brewery will be able to be individually viewed for their information
- Core feature 2 - this feature will allow the user to view food and hotel recommendations near their chosen crawl locations. Users will be able to see information such as price range and reviews
- Core feature 3 - will pull data from the EventBrite API, allowing more social interaction with the pubcrawl. By setting the date and time for your crawl, the user will be able to see nearby events occurring during that time they can attend. Registering for events will be maintained through the external EventBrite site.
- Core feature 4 - Each brewery, restaurant, and hotel recommended will be ratable and discussable individually, as well as reviewable. Reviews and comment chains will be stored and displayed on the respective pages.
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- Able to change route based on road conditions

2020 Dijkstra's Urban Insights Inception

Summary of Our Approach to Software Development

Our approach on software development is analogous to that of nature's tree- we begin with an initial vision and structure, focusing on core features, then building from this core, we grow our features as branches, our stories as twigs. As our core grows, our product grows. We don't forget that the little things matter though- our leaves and flowers define our beauty as a whole.

Vision Statement

For People who want a way to generate the shortest path between pubs, the web app we created is the most convenient that you create a route through multiple points and end to certain

areas. Unlike other systems like our product will be able to select pubs without having to manually enter addresses.

Initial Vision Discussion with Stakeholders

Dev: What is your overall vision for this App?

Stakeholders: Provide the locations and places for the pubs/bars. Be able to incorporate near by places of interest such as places to stay, places to eat, and event creation.

Dev: Expand on Event Creation.

Stakeholders: We want users to be able to create an event for others to join- We want to map out a pub crawl, and assign a date and time for other users to be able to see and choose if they want to join.

Dev: Should non registered users be able to see events

Stakeholders: You need to be a registered user to be able to join and see events. There would be no way to send notifications/reminders for events, as well as checking if your are a bot.

Dev: What is our definition of bar/pub?

Stakeholders: Any place with an actual bar inside of it. If a restaurant has a bar inside, then it can be counted on the list. Whatever the API('s) has access to.

Dev: Is there any features besides route generation you would like to see?

Stakeholders: Generating suggestions for food, places to stay nearby the pub locations. Also, we would like to include the current local weather in a small portion of the screen.

Dev: What should be done about route persistence?

Stakeholders: Beyond having them saved for current events, being able to save routes for people to use as suggestions, or be able to use the same routes in the future.

Dev: What sort of social media aspect were you envisioning? Be more specific.

Stakeholders: Information about the possible events (times, people attending). Using a comment chain/live discussion of each individual bar page which can be displayed when people are searching and researching pubs. We just want all of the discussion done on our site. It would be cool to see various popular social media buttons to share our events with.

Dev: Besides features related to the actual site, would you like to see ads displayed on the site?

Stakeholders: Yes, we would like to see something along the lines of google adsense to help keep the site free to use. No pop ups, just adds on the side bar. We want to have ad blocker disabled.

Initial Requirements Elaboration and Elicitation

Interviews

Q: what would you like to see added to our application?

A: Categories. Live Music, Games, things like that.

Q: What is a feature you think we are missing?

A: A mobile app.

Q: Would you like to see this functionality with other features such as shopping?

A: Yes, I would use that more than the pubcrawl part.

Q: What kinds of things would you like to see in the social media part?

A: I'm not sure, similar to something like twitter. Maybe comments and reviews.

Q: Do you think saved routes would be a good idea?

A: Yes, especially for the case where somebody is new to an area and can explore with locals.

Q: Do you think it is necessary to have restaurant part?

A: Yes, It's important to me, brewery and food, the best combination.

Q: What other information would you like to see?

A: I think pubs/bars opening hours is what I want to see.

Q: Would you like to have some recommendations?

A: Yes, I'd love to have some recommendations when I without ideas.

Q: What something else do you think we need to pay attention to?

A: I think you should have a reminder that people under 21 should not be able to register.

Q: In your opinion, if you were to use a Pub Crawl planning app, what would be the biggest need?

A: The easy display of the pubs on a easy to read map.

Q: Besides planning a route, what other features would you like to see?

A: A restaurant feature would be a good thing to add. Not all bars have the greatest food.

Also, a way to find hotels.

Q: Would you like to see a social media aspect? (i.e 'share to my page' links)

A: Yes, I think that would be cool for showing people where you are at.

Q: Would you be interested in saving previous routes?

A. Yes, I think that going back to look at ones you enjoyed would be nice. Having routes as recommendations would be nice too.

Q: Would you want us to ask for permission before using your routes as recommendations?

A. yes

List of Needs and Features

1. [F]. **(Primary)** They want to be able to see the data put on an actual map in an easy, simple way. (BC)
 - a. [E] As a user, I want to be able to view data about pubs/bars so I can choose which ones to go to.
 - i. [U] As a user, I want the data about the pubs to be shown in an easy to read way, so I don't have to search for more info about it.
 - ii. [U] As an administrator, I want the pub info to come in and be stored in a simple way, so that I have easy access.
 - iii.[U] As a user, I want to be able to see each pub in a list view, so I can choose ones that look interesting.
 - iiii.[U] As a user, I want a map view of all pubs, so I can choose them in that way.
 - iiiii.[U] As a user, I want to be able to save pubs I am interested in for later, so I can come back to view them.
 - b. [E] As a user, I want to be able to sort pubs by location, so I can plan my route accordingly.
 - c. [E] As a user, I want to be able to click on each pub and have a personalized page come up, so I can read more info about it.
 - d. [E] As a user, I do not want to have to wait a long time for the map to fill out, so that I can look at the pubs faster.
 - e. [E] As a user, I want to have we documented directions for the app, so I can use it with no problems.
 - f. [E] As a user, I want my data to be stored in the database, so it can access it faster.
2. [F] They want to see the hotel/restaurants/events nearby(LN)
 - a. [E] As a user, I want to be able to view possible hotel/lodging options around the bars you are attending, so I don't have to drive home after drinking.
 - i. [U] As a user, I want the hotel sorted by different ways like location, price, etc, so I can view them better.
 - b. [E] As a user, I want to be able to see an option for food/restaurants around the bars you are attending, so I can eat delicious food conveniently when I am hungry.
 - i. [U] As a user, I want the restaurants sorted by different ways like location, price, etc, so I can view them better.

- c. [E] As a user, I want to be able to click on each hotel/restaurant and bring in reviews and comments for those places, so I can choose the best one.
- d. [E] As a user, I want to be able to make a reservation of hotel/restaurant directly on the page, so I can check in more easily and quickly.
 - i. [U] As a user, I want to be able to contact the hotels/restaurants directly, so I can get more information or cancel the reservation conveniently.
- e. [E] As a user, I want to be able to see the events nearby, so I can have fun with others.
- f. [E] As a user, I want to be able to create an event, so I can get more people involved.

2. [F] They want to see a social media aspect on the site. An in house comment chain on each page, that lets users comment and communicate with each other about the different places. They also want to see a 'share' button, that lets you share a link to other social medias that you may be on. (NC)

- a. [E] As a user, I want to be able to sign in so that I can see my account details.
 - i. [U] As a user, I want to be able to add other users as friends so I can see what they are posting.
 - ii. [U] As a user, I want to be able to store my favorite routes so I can go back to them.
 - iii. [U] As a user, I want to be able to add a profile picture and brief profile description.
- b. [E] As a user I want to be able to "like" previous routes and leave comments on them so others can see my unoriginal opinions.
- c. [E] As a user, I want to be able to have a homepage to see friends posts and comments so I can stay up to date.
- d. [E] As a user, I want to be able to share things from this site to other social medias (Reddit, Facebook, Twitter) so I can let more people know about crawls.
- e. [E] As a user, I want to be able to comment on various pubs so that I can share my opinion with people besides friends.
- f. [E] As a user, I want to be able know and change who can see my personal profile.

4. [F] They want you to use the Eventbrite API to be able to show events happening around town, and show them in a 'you might be interested in' fashion. Clicking on the event will show basic information for the event- To register for the event, there would just be a link that leads back to the Eventbrite site for third party registration.

- g. [E] As a user, I want to be able to see local events occurring during the time of my crawl so that I can participate
- h. [E] As a user I want to be able to create my own pub event within the app so that I can invite my friends
- i. [E] As a user, I want to view, rate and comment on events others have made so that I can contribute to the conversation

- j. [E] As an administrator, I want the ability to modify and remove events so that the site can be moderated
- k. [E] As a visitor to the web app, I want to be blocked from seeing personal information and more sensitive events so that it's harder for robots and unregistered users to steal information
- l. [E] There should be functionality for the user to upload documents and pictures for their events

Initial Modeling

ER-Diagram

Use Case Diagrams

See other files

Other Modeling

Identify Non-Functional Requirements

- For the end user, they should feel safe and secure while logging in to the site
- The end user should feel that searching for, selecting, and generating a pub crawl is fluid and dynamic, easy to use
- The web pages should render reasonably quickly
- Database queries (Such as AJAX searching, displaying results, finding information) should be relatively quick as we don't want the site hanging
- The web app should run similarly on most browsers without pieces missing or errors occurring

Identify Functional Requirements (User Stories)

1. [U]. As a Visitor to the site, I want to see a nice looking homepage with links that work, so I can easily explore the site.

2.[E]. As an owner, I want the basic site to be set up and working, so we may start adding features as we go.

[U]. As an owner, I would like a functioning database at the start, so we don't have to worry about that later.

[T]. Draw out an ER diagram for the DB, and make sure all of the relations are correct.

[T].Write an up.sql

[T].Write a down.sql

[T].Write a seed.sql to populate

[U]. As an owner, I want the basic pages for each database table set up, so we can make sure the data is being displayed correctly.

3. [U]. As a user, I want to see a page explaining how the app works, so I can understand and use the app better.

[T]. Write step by step directions out with the group, explaining how to create a simple route.

[T]. Make all of the directions very clear and readable.

[T].

4.[E]. As a user, I want to be able to create a pub crawl route, so I may easily travel to all of the pubs without having to use another app for directions.

[U](Maybe an Epic). As a user, I want to be able to view all pubs in a certain radius, so I can choose which ones I want to add to the route.

[U]. As a user, I want to be able to save my previous routes, so I can come back and view it.

[U]. As a user, I want to be able to view the pubs on a map, so i can see their exact location

5.[E]. As a user, I want to be able to view hotel and lodging options around the places I go, so I don't have to drive after drinking at the pubs.

(Highest priority)6.[E]. As a user, I want to be able to view the pubs on a map, so that i can choose from the options.

Initial Architecture Envisioning

See architecture drawing

Agile Data Modeling

See pictures

Timeline and Release Plan

Sprint 1 -

- Create main project and setup database
- Begin and work on Primary core feature

Sprint 2 -

- Finish primary core feature

Sprint 3 -

- Core feature 2

Sprint 4 -

- Core feature 3

Sprint 5 -

- Core feature 4

Sprint 6 -

- UI/Flow reworking, code cleanup, extras if time