Food Trucks Nearby

Project Overview

The web application I will be developing for my Capstone project is a food truck application called “Food Trucks Nearby”. The application will allow users to view food trucks in their area and peruse relevant information including current location and hours. While the focus is on users looking at nearby food trucks, truck owners will be able to manage their information, including contact the admin to add their truck or address incorrect information. Future possible features include reviews, menu integration, comments, and direct control of truck listings by owner. The overall goal of the application is to help connect users with food trucks using relevant information, and in return help food trucks increase their visibility.

Purpose

Food trucks are a growing industry, with over 35,000 active trucks across the US (Vasic, 2022). While some food trucks have their own websites, many rely on other applications such as third-party applications such as Facebook. Third party application are not always up to date and while Facebook can be an excellent tool, with a vast user base and ability to create groups, results are at the whim of Facebook’s underlying algorithm. To that end, “Food Trucks Nearby” aims to be a comprehensive collection of food trucks in specific areas. Links to relevant websites or Facebook pages will be included as additional resources, further reducing the need for extra searching. As a single collection, users will spend less time looking for their next trip while food truck owners will have another method of increasing visibility and advertising their trucks.

Personas

There are three main groups that Personas can be split into: users looking for information on available food trucks, users looking to patron food trucks, and food truck owners. Users may be looking for a list of nearby trucks and contact information for events such as company luncheons. Using the application said user can view trucks and filter to their needs. Facebook or website links can then be used to contact a selected food truck.
Users looking to patron a truck can weigh the options listed and use the relevant information of current location and times, mapping to the truck if needed.
Food truck owners can view how their truck looks on the application and contact the application admin to add their truck if missing or address incorrect information. In a future build the vision is for food truck owners to be able to manage the information of their truck(s) individually.

Value

While the initial purpose of the application is more community based and supporting local food truck business, there is potential for monetization. The diverse community of food truck owners, and support of small businesses, can be positive for the company image and incur public goodwill. This can help the company in other business ventures and bring in more users to the application. Ads can be implemented into the application and continuing to grow the user base will bring in more ad revenue. Ensuring the application is comprehensive and accurate will further draw in more users and allow for expansion of the application. Further in development a monetization system can be implemented for food truck owners, charging them a service fee in exchange for the increased visibility and convenient management of information.

Interaction Solutions

I imagine “Food Trucks Nearby” being used whenever a user has a problem related to food trucks. Examples include curiosity in what is around, looking for something specific, or creating a favorites list. A user can change the city as needed, if the application services the area, to update the list of food trucks. Using the search function further refinement can be made based on underlying tags, such as the food type (Mexican, Cuban), specific items such as tacos, or based on the first letter in a truck’s name. Clicking on links in the cards will direct to the relevant Facebook page or website for more information or contact. A user clicking on the Map pin will direct to Google maps, auto filling the food truck location and requesting for the user’s location or permissions. As a result of any of these actions a user can share, plan, and/or visit a food truck without extra searching and time. Any food trucks a user enjoys can be saved as a favorite; next visit the food truck(s) will show on the home page after signing in without needing to search again.
Food truck owners can view their information as a customer user would and contact the admin if necessary. In this case they would access the “About/Contact” page and use the provided contact information or form. Admin will receive message and address feedback or contact owner back as needed.

Minimum Viable Product

MVP Overview

The main purpose of the application is to be a food truck repository for user access and utilization. This requires that uses be able to access and view food trucks that are nearby and truck specific information. Users need to be able to narrow down truck possibilities based on current geographical conditions. As the number of trucks is variable further refinement of will be necessary to serve different user tastes and needs. Important information for users to know includes but is not limited to current location, current times, and the type of food truck. For added convenience easy access to directions and links for additional information may be necessary for a user. After using the application users will develop favorites and need a way to quickly access such favorites.

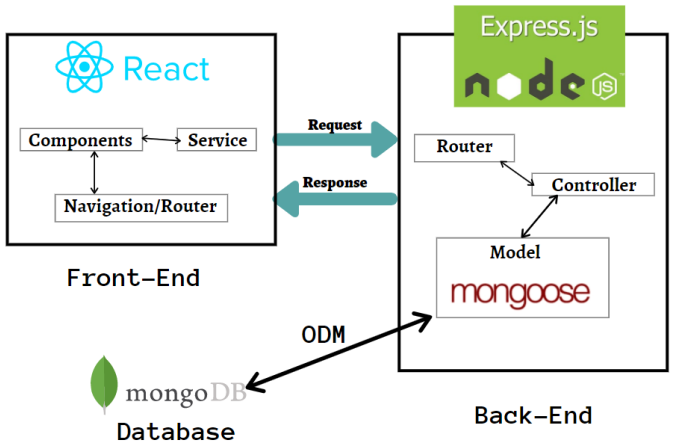
Minimum Features

As the core of the application is food trucks and users having access to the necessary information, the minimum features are aimed at those purposes. These features include:

- Creating or signing into an account
- Creating favorites list
- Adding to or removing from favorites
- Viewing food trucks nearby, defined by city
- Refining results using search bar
- Map directions to food trucks
- Additional links
- Share button
- Contact admin

Food truck owner features are part of future releases and development.

Architecture



(S, 2021)

After researching a variety of options for development of a full stack web application, I have decided on pursuing a MERN stack. As the diagram above explains, React will used on the front-end UI with Express.js and Node.js making up the backend. MongoDB is the database that will be used with Mongoose serving as an ODM to help with schemas and other services. For deploying the application, I am considering Heroku, DigitalOcean, and AWS as options. The plan is to implement Google Maps API for mapping functions of the food trucks listed. For storing images used in the application I am looking at multiple services for image storage including DigitalOcean, Google Cloud Storage, and GridFS. Cloudinary is another option that I have seen mentioned but not looked into yet.

Data

The main sets of data will consist of User objects and Food Truck objects. User objects will contain basic information such as name and email; there is no need for any sensitive information to be saved. Food trucks will contain data including open times, locations, and links.

User Object

```
{
  “id”: string,
  “fname”: string,
  “lname”: string,
  “email”: string,
  “password”: string,
  “favorites”: [
        {“foodtruckId”: string},
        {“foodtruckId”: string}…
    ]
}
```

Food Truck Object

```
{
  “id”: string,
  “name”: string,
  “hours”: string,
  “location”: string,
  “longitude”: string,
  “latitude”: string,
  “dateadded”: Date
}
```

Future considerations: Geolocation objects for truck location, best ways to store different hours and locations for weekly display and daily changes.

References

S, Y. (2021, October 16). *What exactly a mern stack is?* Medium. Retrieved March 13, 2022, from https://medium.com/techiepedia/what-exactly-a-mern-stack-is-60c304bffbe4

Vasic, D. (2022, February 28). *20+ food truck industry statistics: What's cooking in 2022?* SmallBizGenius. Retrieved March 13, 2022, from https://www.smallbizgenius.net/by-the-numbers/food-truck-industry-stats/#gref