

***Stage II – Inception: Project Proposal and Specifications***  
***Sam Hajnasrollahi, Matthew Izzo, Joseph Candiano, Babette Chao***  
***2-24-20***

**Problem Statement**

The issue we want to address is part of the larger issue of climate change and sustainability. Eating foods involving animal products and other harmful elements has more of an impact on the environment than say vegan options. We want to solve the issue of some people not being aware of these options or being able to find that.

**Objective**

As the consequences and long-term effects of global CO2 emissions have become prominent, many companies and countries are trying to do their part by working toward climate control and carbon neutrality. Another big factor in helping climate change is making the change from meat-based food options to plant-based and vegan food options. Not only does this diet have a benefit for your personal health but the impact on the environment is just as great. Our module will allow for people who live in New Jersey, or are thinking about moving here, to see how we are doing in terms of sustainability and if there is a certain town or county that is leading the pack.

**Desired End Product**

Create a web page where users can search either a municipality, or a whole county within New Jersey to query our database and give the user the sustainability statistics for that certain municipality or the county. The query to our database should also return the local restaurants with plant-based food options within a certain radius of the initial search.

**Importance and Need**

In regards to working on the issue of certain foods causing more harm to the environment than others, our module should be important to a good amount of people. It is of course supposed to be more localized to New Jersey so it won't solve the entire issue of not eating a plant based diet, by it will help and there is a need for this type of module.

**Research**

Our group has and will be using some of civicstory.org's, along with srhub.org's, articles to gain knowledge on the sustainability issue. We would use the dataset of all of New Jersey's municipalities' sustainability numbers to return to users. We will also research some of the top restaurants in New Jersey with either an emphasis on their plant-based options and/or their plant-based options at the top of the menu.

### **Similar Systems**

There are no similar applications that we could find pertaining to web pages that search a database of food options. However, there are applications like Yelp and Grubhub which let you search food options near you which could include vegan options. Our system is not being designed to work exactly like that though. Also there is a widespread effort on informing the general public and making the change to better the environment through dietary changes.

### **Other Possible Applications**

This web-page could be modified in the future to allow users to input their diet and learn more about the importance of a plant-based diet. Another modification could be to allow users and municipalities to interact with each other to offer ideas and feedback about improving a certain area. Could also be modified and scaled to support a wider range than just New Jersey, this would only be possible if the application becomes a larger effort.

### **Performance**

Our current idea for this website is not going to truly focus on performance. We will of course make sure we follow proper coding standards to ensure our database and web page communicate as smoothly as possible. It is important that the search does not take too long as that will be annoying to any user, so we will try to avoid the basic mistakes of coding, and avoid nested if/for loops.

### **Security**

Since users will enter information about their food choices, the database should be secured to protect the user identities and food choice. The data gathered is used to provide more sustainable options near them, so assuming the users will also enter information about their local address, the database would have to protect the users' locations. One way we can try to secure the information given by the user is by encoding the data before using the information to find more sustainable options near the user. We can also use access control, by only allowing the admin to access the information, and establish identity upfront, so make users log in, in order to enter / view information in the database.

### **Backup and Recovery**

Backup and recovery will be handled using GitHub. We will make sure to actively push and pull updates to and from using Git commands to avoid any loss of data. Other data such as research could also be stored on the cloud using Google drive along with local copies on our separate machines.

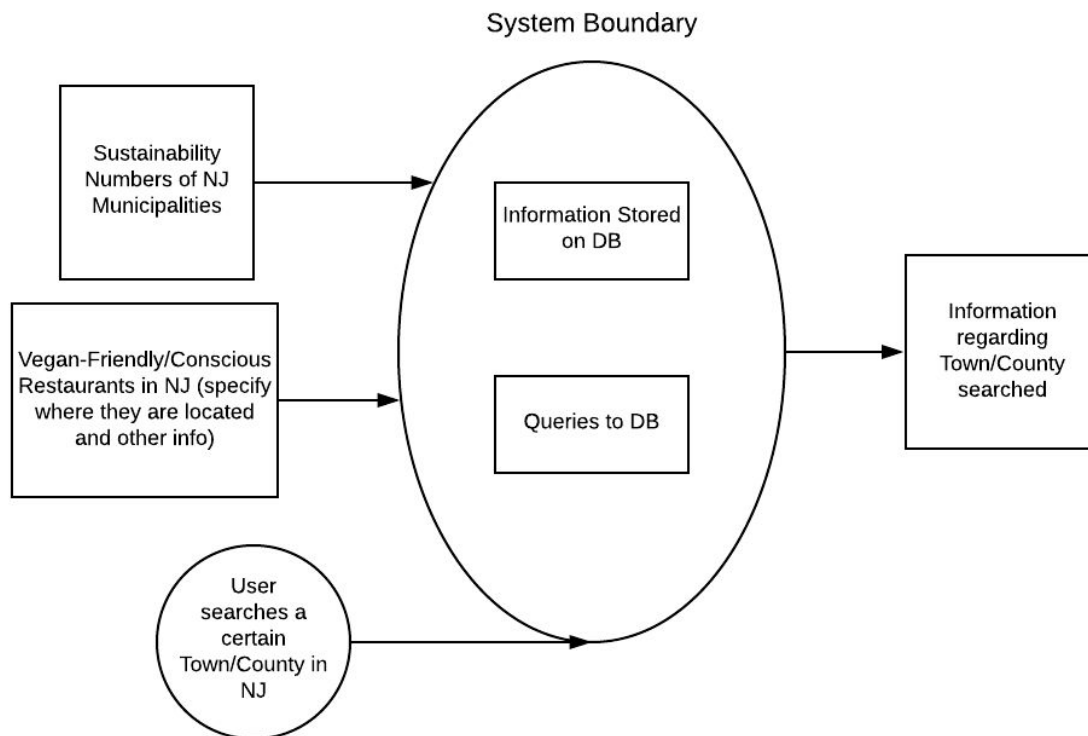
## **Technologies and Database Knowledge Needed**

The team would need to learn PostgreSQL, while learning Python and PHP. Since most of us already have knowledge on Python and PHP, we would want to focus on learning PostgreSQL. To learn what was mentioned, we would watch some tutorials on Youtube online, while also finding credible and legitimate websites online that have information on learning PostgreSQL.

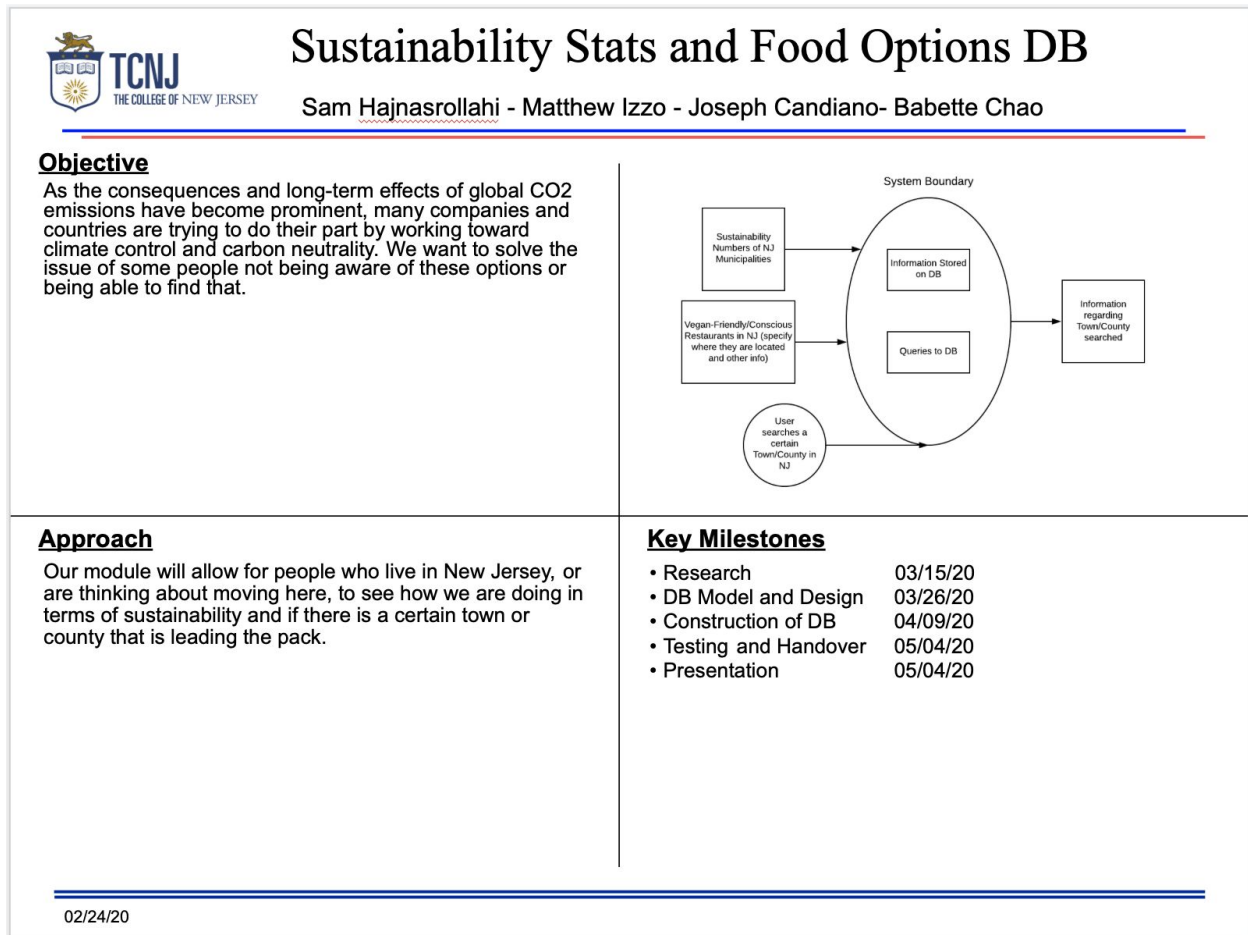
Some websites we could use:

- <https://www.postgresqltutorial.com/>
- <https://www.postgresql.org/docs/8.0/tutorial.html>
- <https://www.tutorialspoint.com/postgresql/index.htm>

## **Diagrammatic Representation of System Boundary**



## 1-page quad chart



## Team Roles

Our integration lead will be Joe Candiano . All members from the databases course will split time coding the project, helping to design and model, and assisting in integration as well. The journalism members will mostly focus on gathering research and data for the database.