CartX - Shopping Made Easy

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What is CartX?

Overview:
As college students, we are always looking to find a way to save money. We found that often times students are driving further or even paying more for groceries that they have to.

Our Mission:
We created a website where you input your grocery list and are given the best store to go to. We base this analysis off of the users distance to the store and the amount of items from your list that they contain.

Current Supported Stores

Goals for Semester

Frontend
Utilized React and Bootstrap to create two pages: select and analyze. The select page allows the user to search for the items they desire and add them to their cart. The analyze page displays what the best stores are to visit based on “Cart Points.”

Backend
Utilized API routes to create a separate backend for computation. Handles collecting proper data from the database, match items to users selection and handle external APIs (Bing Maps).

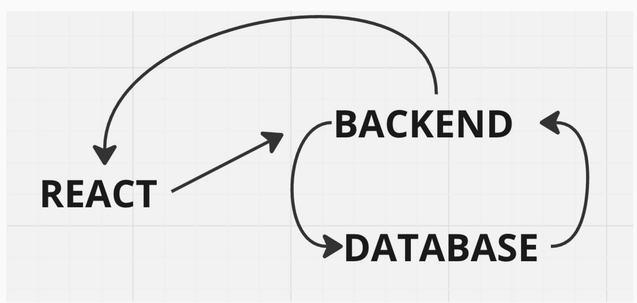
Database
Utilized MongoDB to preemptively web scrape stores near RPI for near instant access time when the user searches.

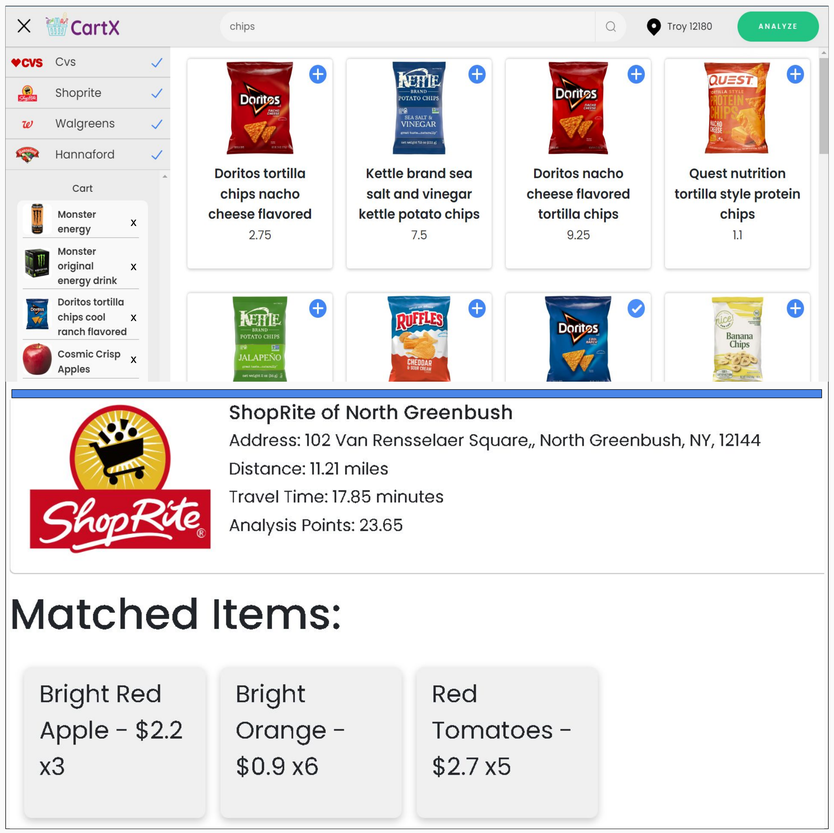
Data
Gathered data through web scraping store websites. The store format was often inconsistent, forcing us to utilize python algorithms to standardise the size, type, and quantities

Architecture Diagrams

SOURCE OF DATA

Web Scraping + mongoDB





Matched Items:

- Bright Red Apple - $2.2 x3
- Bright Orange - $0.9 x6
- Red Tomatoes - $2.7 x5

Future Goals

Frontend
There are still certain bugs in the frontend which need to be fixed for the optimal user experience as well as the possibility of implementing a mobile app.

Backend
The algorithm which matches items based on the users selection currently is currently utilizing a brute force approach. While it is not a major issue do to pre-sorting items, it is something which should be improved.

Data
Currently the data is webscraped every time we run our python script. In order to keep the data as accurate as possible it would be best to setup an automated script to web scrape all the items every 1-2 days.