Meeting minutes

## 11/25/22

## Action Items:

## Soo - needs to get endpoints for store recommendation model, internationalization, combine recommended store list + map, show user location on map

Fidelia/Mariah - BLOOM model for cheaper alternatives

11/1/22

Cosine similarities - function to call to get official name of item

- input - item name

- output - official name

Optimization model - get list of stores and price total

- input: grocery list, distance, user location

Bert model - subcategories - back end only

Recommendation model - may not be needed

- just get cheapest option from the category that Bert model determined for an item selected

Directions api

* Javascript

Input options

* Exact address
* Or allow location access (lat, long)
* Or zip code

## 10/22/22

To Do:

* Fidelia: send slides, update list of groceries cosine similarities, finish workshop 11 slides
* Mariah: update Gantt chart, work on recommending cheaper alternatives, create subcategories list
* Pony: continue working on getting user location, determine travel times
* Soo: continue working on UI to match wireframe, figure out how to put this on the cloud
* Shirley: help Pony with the linear optimization based on user feedback

If budget constraints arent met, say “Hey we can’t a store to match your basket items.” error message

Flow of the app:

1. get user location: match to address on map

* Pony working on location: Google API?
  + Using only zipcode
  + Check what kind of output the Google API gives back

2. get list of groceries: match to known item names, get stores and prices

* Fidelia

3. Create routing travel times, minimizing number of stores

4. Return routing and total bill to user for validation

5. user can accept route and list or push back on either price or travel times

6. if there is push back, re-match to list reducing either price or travel time as needed, repeat until user accepts

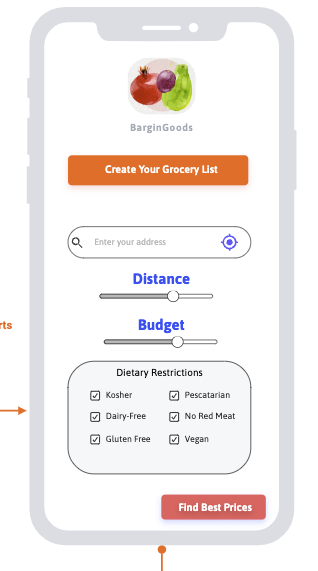
* Pony/Shirley

7. Recommend cheaper alternatives

* Mariah
  + Create subcategories list (dictionary of items: {berries: blueberries, strawberries, cranberries, etc.})

## 10/22/22

Meeting with Joyce and David



1. get user location: match to address on map

2. get list of groceries: match to known item names, get stores and prices

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Optimization:

* Constraints/input
  + Users location (address)
  + Budget
  + Distance willing to travel
  + Grocery list
* Look for the cheapest version of each item on the users list at each store
* Create a total price at each store and distance from user
* Give user list of stores and total price

Recommendation:

* Once the user chooses a store
  + Cosine similarity for the cheaper alternatives for each item

KNN - we don’t have user preferences

Input

* User grocery list

Output

* Store
* Item name
* Price

GBM - needs constraints like budget

Contraints

* Cheapest price for the total - budget cap
* Closest store - distance or time to travel?

Input

Output

Workflow

1. Match user text to item names in database - cosine similarities
2. Get back price and item name
3. Then do optimization model optimizing based on price and location
   1. Recommend other options based on price and nutrition equivalency

UI

1. Click on a map

Computation component

1. Match item names
2. Compute the price for basket for each store

Calculate travel time - google prior solution

* Get geo location of user

## 10/19/22

Model questions

1. Match list to items in the database
   1. Just match ngrams
   2. Shouldn’t need cosine similarities for something like this
2. Recommend store based on price and location and grocery list
   1. More of an optimization problem?
   2. <https://machinelearningmastery.com/tour-of-optimization-algorithms/>
   3. If 2 stores have only $1 difference but one is 15miles away and the other is much closer, which do we recommend?
      1. Joyce - give both and let user choose
   4. <https://www.google.com/search?q=grocery+store+recommendations&oq=grocery+store+recommendations&aqs=chrome..69i57j0i22i30j0i15i22i30l2j0i22i30l3j0i22i30i457j0i15i22i30l2.4226j0j7&sourceid=chrome&ie=UTF-8>
      1. <https://rawalrameshr2.medium.com/recommendation-system-for-grocery-store-f61658d2663>
      2. Instacart blog

Action Item

* Team to research the modeling options for this type of problem
* Set up time to discuss with joyce and david

## 10/16/22

* Interview with SME
  + Optimize for walking distance
  + Feature for specifying religious dietary restrictions
  + Main grocery stores that her target group uses
    - Keyfood
    - Target
  + Future feature
    - Crowd sourcing for smaller groceries that low income families use

### Action items

* Get deck ready for review by wed or thus (10/19-20) with Joyce and David

## 10/5/22

* Elevator pitch
  + 30s long
  + Intro you and team
  + Describe project - what problem we’re solving, why it matters, technical approach
  + End with an ask
    - Watch our demo, try our app, etc…

## 10/4/22

* Meeting with David/Joyce
  + 2nd presentation - summarize impact,
* Groceries prices
  + Crowd source
    - Pick 3 stores in one city
    - Focus on dairy, meat and fresh produce
    - Get macro nutrient data - just calories for now
    - Columns
      * Brand
      * Store
      * Calorie count
      * Price
      * Category
      * Name of food
* Status update
  + Create new project plan
  + Look for datasets
  + Scrape for price data from websites
  + Set up aws and front end

## 9/28/22

* Meeting with David/Joyce in breakout rooms
  + Focus on literature review
  + Real life samples to interview
  + Focus on a specific geographic area like a populous city

## 9/25/22 - Meeting with David and Joyce

* Primary issue: not yet been persuaded that we are solving a problem that is going to have the impact that we think it will
* Other potential data science solutions:
  + David: Cost efficient meal prep budgeting
    - Optimization problem to find cheapest options for protein, fats, carbs etc
    - Audience: low-income people
      * Wages not keeping up with inflation
      * Income is least addressed by current fitness apps available on the market
  + Joyce:
    - Lose macro nutrient focus
    - Make the assumption that everyone wants to eat healthier but dont know what to do with different ingredients and what they can buy
    - Recommend restricted individuals food category groups/recipes (high blood sugar, low immune system, etc)
* Brainstorming after meeting
  + Grocery optimization app
    - User enters grocery list and app compares prices in different grocery stores to get the store that will optimize their list price
    - App could also suggest healthier or better priced alternatives to items in their list

## 9/18/22

Shirley posted Joyce’s feedback on our project plan to our group chat

* Key point: need to narrow scope and figure out our target audience
  + Doesn’t think people looking for budget meals are the same group as people looking for macro eats goals
* Hi Team, I read the project plan. A nice start but a few key things that need to be clarified:
* - target user needs to be validated. I find it hard to believe that the low-income demographic is the same as those who desire to have the right meal prep to meet nutritional goals. It is a huge jump in assumption, and I saw some inconsistencies in the plan
* - It is not clear to me what is to be recommended -- food in different food groups that need to be eaten or recipes or menus to hit the goals. They will require different techniques and command different technical scopes
* - The overall scope seems broad, based on the point above.
* It is important to further refine the user audience to make sure the proof-of-concept is serving a true need for a demographic that wants this. To do this, you need to talk to potential target users.
* David may have additional comments.
* **Decision:** MVP will focus on providing recommendations for meal options in nearby restaurants (ones supported by our dataset) that meet the user’s macro targets based on their day’s macro consumptions.

Fidelia - started slides

* [Slidesgo](https://slidesgo.com/) - free app that has templates to import to google slides
* Deck - <https://docs.google.com/presentation/d/1Ar5AHFm0qvPSEJdoUylbOSIoqkmWs1wQSHkyIBaiGXc/edit#slide=id.g6b9affecee_0_31079>

**Next meeting:** 3:30pm PST Wednesday 9/21 (right before class)

**Action Items:**

1. Fill in the [slides](https://docs.google.com/presentation/d/1Ar5AHFm0qvPSEJdoUylbOSIoqkmWs1wQSHkyIBaiGXc/edit#slide=id.g6b9affecee_0_31079) you own
2. Practice timing of your slide presentation

## 9/13/22

Finished up project plan

Found a related article on a similar app: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6242282/>

Might give some guide on building the recommendation model

Action items:

1. Prep for week 5 presentation
2. Update when2meet to decide next team meeting

## 9/11/22

Project plan

Team process agreement

### Action items:

1. All - think through mission statements and title of project
2. All - fill in each of the sections you own
3. All - give suggestions on data science techniques to use in the MVP section
4. All - suggest on dataset if there’s anything come ups to your mind
5. All - Revote on when2meet

Next meeting:

## 9/22/22

* BMR baseline macro needs data
* Meet with Joyce and David to discuss data science piece of our project - collaborative filter
* Find 5 friends to fill out survey

## 10/10/22

* Everyone write an elevator pitch
* Architecture diagram for Presentation 2
* Subcategory added to dataset for user search function when creating grocery list
* Start presentation 2

# 

# Workshops

w4 workshop 1: ethical considerations (Intae, George, Tymon)

w7 workshop 2: privacy and digital identity (Guilhem, Qi, Reece, Mitch)

w9 workshop 3: technical model evaluation (Justine, Stephen, Jacob, Clayton, Prathyusha)

w11 workshop 4: collecting user feedback (Fidelia, Soo, Mariah, Sichen, Pony)