CookCompass

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https://github.com/CMPT-276-SPRING-2025/final-project-04-winds

Overview:

- The idea of CookCompass came from our group member Christian, who struggles with cooking and wanted an easy way to experiment with a variety of recipes with what's in his fridge.

- This project will help users eat healthy while saving money and time. CookCompass empowers users by providing straight to the point recipes and instructions given ingredients already on hand. CookCompass also streamlines cooking for all users by translating recipes into desired languages, text to speech features for hands free recipes while cooking, and measurement/unit conversion for a more familiar experience.

- Potential users include users who are in a rush to make food and can't go shopping, who don't have the money to buy new ingredients, who want to experiment with foods from other places that don't have native translations, who want to improve health and become/stay fit, and who wants to learn how to cook.

API's:

- Spoonacular(Main) - recipe generation
- Hirak translate(Main) - translate between different languages
- Rapid api(Backup) - price comparison
- Rest API(Backup) - fitness and health information

Persona:

1. Christian
   - Age: 20
   - Education: High School Double Dogwood Diploma
   - Background: Novice Chef, Middle-class
   - Goals: Wants to improve cooking for better health
   - Challenges: Tight budget and little time. Doesn't have a car. Picky eater.
   - Characteristics:
     - Curious and eager to learn.
     - Gets distracted easily
     - Likes to work out and track his macros

2. Gertrude:
   - Age: 35
   - Education: PHD in Geology
   - Background: Experienced cook, only speaks Farsi, has children, single parent
   - Goals: Wants to easily find recipes that are quick, healthy, and in her native language to have more free time.
   - Challenges: Busy with long hours at work, and young children, struggles to balance time between work, child rearing, and errands
   - Characteristics:
     - Efficient and practical
     - Health-conscious

Features:

<u>Spoonacular</u> (Main)

1. **Find recipes that use as many of the ingredients you have available as possible while limiting missing ingredients**

   User story: Gertrude is too busy to find recipes so he uses this feature to find a recipe that uses only ingredients she has so she can easily and quickly cook a meal and pick from multiple options

2. **Classify recipes according to diets, allergies, cuisines, etc.**

   User story: Gertrude wants to try vegan alternatives for a healthier spin on her recipes, so she sorts recipes to only show a list of vegan recipes.

3. **Break recipe instructions down into the most simple steps.** Show the ingredients, kitchen equipment, and techniques required for each step

   User story: Christian just started to learn how to cook and he is a bit lost on what to do, so he decides to use this feature which breaks down recipes into more and smaller steps to make them easier for people with less experience to follow.

4. (maybe) Semantic search algorithm combines searching by query, by ingredients, and by nutrients

User Story: Christian wants to eat 51 grams of protein so to make his search easier he can use this feature to search for recipes that have at least 51 grams of protein and pick from a list of options.

Hirak translate (Main)

1. **Text to speech** - Read out recipes while cooking to let users follow recipes while their hands are busy with cooking.

User story: Christian is in the middle of cooking, his hands are dirty with sauces and other ingredients and he doesn't want to dirty his phone. Instead of repeatedly washing his hands to alternate between scrolling down the recipe and cooking, he uses voice control to have the application read out the recipes for a smoother cooking experience.

2. **Translating** - Overcome language barriers by translating foreign recipes into one's native language.

User story: Gertrude wants to explore different recipes from other cultures, but finds it difficult reading recipes in English. With this feature, Gertrude can translate all text into her native language.

3. **Measurements adaptation** - Unit conversion depending on preferred system, imperial or metric, and conversion from cups and tablespoons to grams and ounces.

User story: Christian is baking and needs to know the precise measurements, but the recipe calls for a stick of butter and his block of butter doesn't say how much a stick is. He uses the measurement adaptation feature to convert it to grams so he can use the baking scale instead of searching up every measurement on the recipe.

Rest (Backup)

1. **Calorie/Nutrients tracker** - Tracks macros such as protein and calories eaten, it will suggest how much to eat based on goals and weight, ensuring a safe weight loss/gain.

User Story: Christian has been wanting to lose weight after an extremely large thanksgiving feast but he is not sure how much he should eat to make sure he doesn't hurt his body. So he opens the app, inputs his health numbers, such as weight, activity level,

and goal. The app proceeds to suggest eating 1,500 calories per day alongside 80 g of protein and 20 g of fat. So he continues to log his meals to make sure that he doesn't go too far over, and after a few months, he reaches his goal weight!

2. **Suggested calories per meal** - Suggests how much to eat per meal, changing based on how much was eaten in previous meals to stay within goals.

> User Story: Christian has been starting to lose weight by making sure he stays within a 1,500 calorie maximum. But recently he has found that he isn't sure how much to eat during each meal and sometimes he eats too much during lunchtime meaning he can only have a little bit during dinner. So he opens the app and inputs how many calories he wants to eat in one day. It then suggests amounts to eat during each meal so that he can know what to eat to not go over the limit.

3. **Recommended health articles for staying healthy** - Suggests articles that help with specified goals, alongside with workout plans.

> User Story: Christian wants to start eating healthy, but he wants to learn about the specific foods and why they are healthy, so he opens the app and looks in the articles tab to learn about the benefits of eating eggplants. He also begins to look at workout plans that are offered so he can start going to the gym.

Rapid API Price Comparison (Backup)

1. **Shopping List** - Input a list of ingredients that you want to buy

> User Story: Gertrude has recently done a lot of cooking, but she is starting to run out of some ingredients, and she always forgets her paper shopping list at home, so she opens the app and inputs the list of ingredients/groceries that she needs to buy so she can open the app at the store and see everything she needs on our app.

2. **Price comparison** - compares prices of ingredients from nearby stores

> User Story: Gertrude is shopping for a key ingredient in a recipe while she's out in an unfamiliar location, and she isn't sure which store has the best deal. She uses the price comparison feature to compare current prices within a certain location radius for the best deal closest to her.
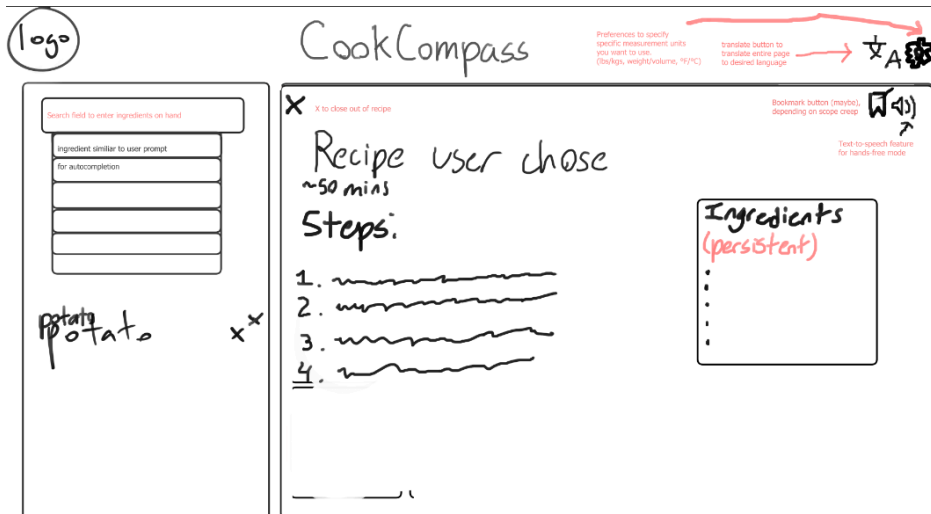
3. **Recipe budget** - gets total recipe cost based on lowest cost of each ingredient needed

   User Story: Christian wants to save money this week, but he also wants to try a new recipe. He uses the recipe budget feature to compare prices of different recipes so he can find the cheapest one for his preferences.

Storyboard:
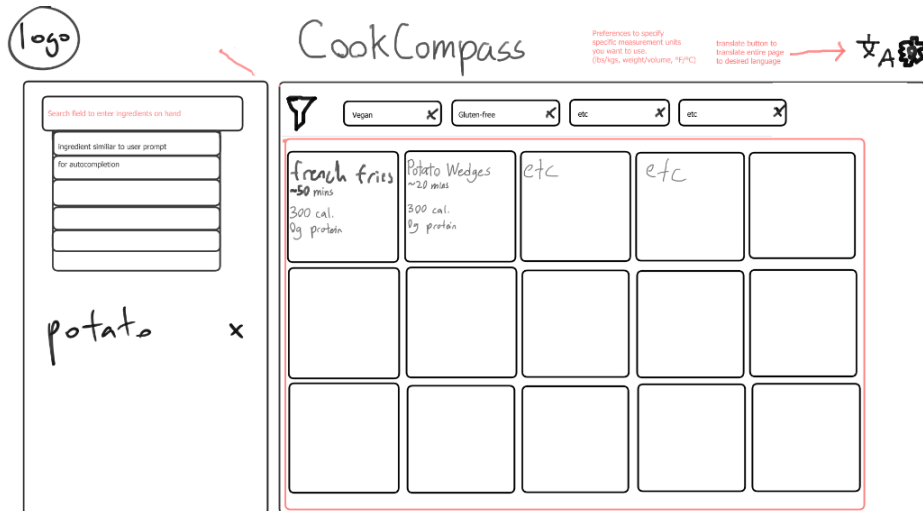
Recipe pops up when clicked:

(Backup) Scroll down to health tracker:

What you ate today

Health tracker

Cal.

Carbs Fat Protein

Weight ∨

Activity level ∨

Fitness goal ∨

Suggested calories

BF Calories.

L Calories

D Calories

Snacks ⬛

Snacks Calories.

Calories.

Suggested articles

(Backup) Scroll down to shopping list feature

Price comparison

recipe budget

input shopping list ingredients:

ingredient similiar to user prompt

for autocompletion

Potato x

Onions x

Price range [ ] - [ ]

Store 1 Store 2 Store 3

$11 $5 $1

$XX

Technology Stack:

We have chosen **Material UI** for our HTML and CSS because from our research we found **Material UI** is the easiest to learn so we can start working on it faster. We have chosen **React** because our research showed that React is very high performance and has really good state management capabilities. Our research also showed React is used in many companies so we decided gaining experience with React would be very beneficial. We have chosen **Jest** because our research found that **Jest** has the highest compatibility with React so we wanted to maximize the compatibility of our programs. We have chosen **Github Actions** because we have the most experience with working with it so we wanted to minimize the amount of problems that we

wouldn't know how to solve. We have chosen **Vercel** because it is well optimized for frameworks like React, so like stated earlier, we want to maximize compatibility of programs.