**Idea I am proposing:** MacroEats - A tool that helps track and maintain macronutrient goals from meals ordered on UberEats

**Your Name:** Fidelia Nawar

**Your background and skills that will benefit this project:** Machine Learning/Deep Learning, React, API integration, AWS, SQL, Python, C/C++, backend/frontend development

**Problem**

One of the main challenges people encounter in their fitness journey is sticking to a healthy diet. Proper physical activity is half the battle to maximizing workouts, and many struggle to find a diet/meals that align with their specific long-term physical goals. To further contribute to the issue, many people don’t have the motivation/time to meal prep in advance, and meal plan delivery services are usually more expensive and not as tasty because they are frozen. This can lead to eating out more often to save time and money in cooking and planning, but eating out frequently poses a “risk factor for obesity and other diet-related chronic diseases” (Am J. Public Health. 2014 April).

**Proposal:** Develop a product where users can input their dietary and macronutrient goals and be recommended meals from nearby restaurants on UberEats that they can order from based on their dietary restrictions. The app would update the available meals the user can consume throughout the day based on what they already purchased/consumed while keeping them within their nutrient goals. This allows for an individualized experience for users who work out and want to maintain their diet while still enjoying eating out. The primary dataset this project would use is the UberEats API and FoodData Central from the USDA to get nutrient profile data.

**Impact**

Tracking macronutrients is essential because by managing the amount of protein, carbs, and fats consumed, people can focus on food composition and overall nutritional value rather than just low-calorie options. Consumers also use macro-tracking apps for various reasons, including helping manage medical conditions, enhancing athletic performance, building muscle, encouraging better food choices, or losing weight.

This problem is critical to solve because it allows for a more seamless experience for health-conscious individuals to eat out more healthily and keep them within their goals. This product would save users time so they don't have to continuously formulate their meal prep ideas and cook the food while tracking their macros to know what they can and can't eat.

**Market Size (How big is this market, based on your research?)**

Based on market research, the intended audience for this product is young adults since they are usually the group of people who work out more and also eat out often. According to a medical Expenditure Panel survey, about 59.7% of young adults reported exercising at least three times a week for half an hour or more. And then according to a different study from Ladders, about 54% of young adults eat out, and 63% use delivery apps like UberEats. With approximately 81 million users on UberEats, it is the most popular app delivery service and will have greater reach to the audience compared to other food delivery services. . In addition, since this product would incorporate macronutrient tracking features similar to MyFitnessPal, it's important to consider the demographics of those who use it to gauge a similar target audience. myfitnesspal.com's audience is 48.03% male and 51.97% female, and the largest age group of visitors is 25 - 34-year-olds, with over 20 million visits each month. Based on these numbers, we have a reasonably large target audience of young adults aged 18-34 who both use UberEats and invest time into working out that would be interested in using this app to track their macronutrients.

**Market Landscape / Competitive Landscape / Existing companies solving the same / similar problem**

| **Company Name** | **Stage (startup, enterprise)** | **Product / Solution overview** | **Who is the primary customer?** | **Key differentiation vs your proposal (based on your understanding/**  **research)** |
| --- | --- | --- | --- | --- |
| MyFitnessPal | Enterprise | Diet tracking app lets you search food items from the database, scan barcodes, track body weight, etc. | Customers seeking to track their diet | Includes key features for macro tracking, but no way to purchase specific meals from nearby restaurants based on dietary restrictions |
| MyMacros+ | Enterprise | Diet tracking app that lets you eat mindfully by tracking meals, learning about habits, and reaching goals | Customers seeking to track their diet and lose weight | Includes key features for macro tracking, but no way to purchase specific meals from nearby restaurants based on dietary restrictions |
| LifeSum | Enterprise | Digital self-care app that provides customers with meal plans and recipes based on a diet that fits their lifestyle and food preferences | Customers seeking simplified meal plan and nutritious recipes | Does not provide the ability to purchase food items from nearby stores, limits customer to meal plan and pre-planned recipes |
| Nutritionix Track | Enterprise | Fitness tracking app developed and maintained by a team of registered dieticians to work towards customer's health goals | Customers seeking to track their diet | No way to purchase specific meals from nearby restaurants based on dietary restrictions |
| LoseIt! | Enterprise | Weight loss management tool used to track foods | Customers seeking to lose weight | No way to purchase specific meals from nearby restaurants based on dietary restrictions |
| Carb Manager | Enterprise | Weight loss management tool for keto and low-carb diets | Customers on keto/low-carb diet | Limite dietary restrictions to only keto/low-carb does not provide the functionality to purchase meals from nearby restaurants |

If you can’t identify existing solutions or similar solutions that solve the problem, please explain why there isn’t an existing solution.

**Relevant readings, market research, white papers, academic research (share title and link)**

# User Perspectives of Diet-Tracking Apps: Reviews Content Analysis and Topic Modeling

# [**https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8103297/**](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8103297/)

# Controlling Your “App”etite: How Diet and Nutrition-Related Mobile Apps Lead to Behavior Change

[**https://mhealth.jmir.org/2017/7/e95/**](https://mhealth.jmir.org/2017/7/e95/)

# Diet and Physical Activity Apps: Perceived Effectiveness by App Users [**https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4840256/**](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4840256/)

**Datasets (please first identify open, public datasets or data that you believe can be generated)**

UberEats API - <https://developer.uber.com/docs/eats/introduction>

FoodData Central - <https://fdc.nal.usda.gov/>

**Possible data science techniques and why?**

Insights

* Explore insights from unstructured/structured data provided by users to help make strategic decisions
* Some users may have similar demographic information, but progress would be different. Some may lose weight faster than others, which could help data scientists determine more actionable insights

Clustering Analysis

* Good algorithm to analyze user data, such as the relationship between weight reduction rate and age
* Reduces time cost

Reinforcement Learning

* Learn intelligent behavior in a complex dynamic environment
* For example, the app can track users' consumption and workout habits and warn them of foods not to eat, and instead populate feed with suggested recommendations
* Collect "successful data" from users who successfully reached their goal based on app's recommendations
  + Have successful data go through the network, select random actions, and feed them into the engine to create an optimized model for the app