Team 11
Purdue Eats

Team Members:

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Project Charter

Purdue Eats

Problem Statement: With the onset of COVID-19, Boilermakers have and continue to experience long wait times at Purdue's dining facilities and struggle to make good dietary decisions. Purdue Eats aims to utilize machine learning (ML) model(s) to understand a student's eating habits and provide them with a personalized dining experience at Purdue's dining facilities. Purdue Eats is tailored towards user-specific dietary needs and provides more relevant and timely information to users compared to existing applications such as Purdue Menus, Purdue's current dining app.

Project Objectives:

1. Recommend to individual students where they should eat based on their past eating habits
2. Recommend a dining location for two or more students that cumulatively fits their eating habits
3. Allow students to seamlessly integrate desired meals into their personal schedules
4. Provide students with nutritional information regarding their meals
5. Allow students to track the number of meal swipes they have remaining in their meal plan
6. Assist students in finding others to eat with

Stakeholders:

Users: Customers of Purdue University dining facilities (mainly students)
Project Manager: Yamini Ponugoti
Project Owners and Developers: Aniket Agnihotri, Anisha Sinha, Eric Thompson, Mark Jin, Sean Joo, Vaastav Arora

Project Deliverables:

1. A mobile application for both Android and IOS. Built using React Native.
2. A machine learning (ML) model that utilizes historical dining data of current and past customers of Purdue dining courts; data procured from Purdue Menus API and self-reporting users. Built in Python using Starlette and BigQuery.
3. A prediction service based on the above ML model that provides meal recommendations for an individual or for a group of users. Built in Python, containerized using Docker, and hosted on Google Cloud Platform (GCP).
4. A self-reporting page on the mobile app that allows users to input what they ate at a specific dining facility on a certain date. This information will be used to track a user's meal plan usage and nutrition profile through the week and is also fed into the ML model to improve performance.
5. Visualization of personal nutrition profile for user generated from their self-reported dining data in combination with MyFitnessPal Nutrition API, including macro and micro nutrient profiles.

6. Queuing (wait) times for each dining facility based on self-reported dining data and popular times as reported by Google.
7. Lunch Buddies option allowing users to match based on past eating habits and selections.