**Identification**

Name: TigerEats

Project Leader: Ishan Sinha

Team Members:

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**Elevator Speech**

College students are some of the most fitness-conscious people on Earth, yet it is unnecessarily difficult to remain fit on campus, leading to issues like the Freshman 15. As a first step at addressing this, Ishan is developing an enterprise nutrition app that will link to college campuses’ specific cafeteria items and nutrition facts, give users personalized recommendations of portion sizes of foods they choose to eat in order to meet their goals, visualize the recommended portions on their plate, and give them discounts at local businesses for tracking their nutrition in this manner. We are developing a companion nutritionist portal website that will allow campus nutritionists to view students’ meal intake history, give them recommendations and feedback on their choices, and update their goals as necessary. We will make it seamless to track nutrition intelligently on college campuses instead of difficult, as it is right now.

**Overview**

Current fitness apps like MyFitnessPal do not work in closed ecosystems like colleges and workplaces since their generic food databases do not contain the specific menu options served in these closed ecosystems’ cafeterias, and the closest generic food options often have vastly different nutrition facts than those in these cafeterias. Furthermore, users of these apps need to know how much they are supposed to eat, plan out their portions far ahead of time to meet these goals, and weigh their food to meet these portions, often leading users to have a very monotonous diet. On the side, Ishan is working with a separate team to develop the first enterprise nutrition app. The app will scrape these closed ecosystems’ cafeteria menu items and nutrition facts, providing a clean interface for users to evaluate options. Further, it’ll allow users to put in their height, age, weight, gender, activity levels, and fitness goals; based off this, there are recognized formulas that determine how much a user should eat. Then, when a user enters a cafeteria, he selects what he wants from the menu, and can either input the portions he took OR the app will tell him how many portions he should take of the items he chose in order to meet his goals and visualizes those portions on his plate for him.

We are developing a nutritionist portal website to accompany this mobile app. The nutritionist portal will allow college or workplace nutritionists to see the goals and meal intake of users who grant access, view these users’ progress over time, give users personalized feedback and recommendations on their eating choices, and update users’ goals as necessary to keep them on track for their goals. By providing a clean interface for nutritionists and individuals to interact, we hope to make it easier for individuals to meet their fitness goals.

**Requirements**

The intended users of our system are college and workplace nutritionists, though for this project, we will be focusing on college nutritionists; typically, colleges have one campus and one sports nutritionist. This system will give them an easy way to check up on their students’ meal habits and make personal recommendations to guide them in the right direction. As of right now, campus nutritionists can have general meetings with students and give them general advice, but there’s no easy or reliable follow-up mechanism; they then must hope that the student follows their advice, have a tedious back and forth of the student taking photos and noting what they eat generically and sending it to them, or take the student’s general word for what they ate. Similarly, sports nutritionists give athletes very specific recommendations as to how much they should be eating everyday (even with a macronutrient breakdown), but athletes typically just end up eating a lot or what generically fits the nutritionist’s recommendation. The check-in process is as imprecise as it is with campus nutritionists. We will add visibility, accountability, and easy communication.

**Functionality**

* Login
  + Nutritionist logs in with CAS
  + (If time) display items being served at each cafeteria by meal, with an option to click to see nutrition facts
  + Nutritionist can navigate to…
    - Dashboard
* Dashboard
  + Filter students by gender, team, goal, or class year
  + View key topline facts about students -- Name, Last Active, Gender, Class Year, Team (if at all), Meals Logged/Day, Calorie goal, Protein goal, Fats goal, Carbs goal
  + Nutritionist can navigate to...
    - Individual student’s landing page
    - Messages tab with students
    - Filtered view of top priority students
* Individual Student Landing Page
  + Send a message to student
  + Add them to Top Priority List
  + View student’s profile and physical traits
  + View student’s progress on daily goals
  + View student’s nutrition, meal breakdown, and photos of meals by day (scroll to see prior days)
  + Add note to user’s meal choices
  + Nutritionist can navigate to...
    - Dashboard (back button)
    - Messages tab with that student
    - Filtered view of top priority students
    - Change Daily Nutrient Targets
    - Progress
* Change Daily Nutrient Targets
  + View user’s nutrition goals -- calories, protein, fats, carbs
  + Change user’s nutrition goals
    - Must pass validations on changed goals
  + Nutritionist can navigate to...
    - Individual student’s landing page OR Dashboard (whichever they landed from
* Progress
  + View progress over time of user’s weight or calorie/protein/fats/carbs consumption
  + Choose which metric they are interested in and time frame
  + Nutritionist can navigate to...
    - Individual student’s landing page OR Dashboard (whichever they landed from
* Messages (if we can get here -- otherwise it’ll just be emails from nutritionist to student)
  + View message history with students, similar to “View All Conversations” in Facebook
  + Send messages to students
  + View messages that students have sent back
  + Nutritionist can navigate to...
    - Dashboard
    - Individual student’s landing page

**Design**

* Databases
  + students table
  + cafeteria\_nutrition table
  + meals table
  + messages table
* Tech stack
  + React (with Redux)
  + Flask
  + Postgres SQL
* Application breakdown
  + Login
    - Presentation Interface -- TBD
    - Business Logic
      * CAS login
      * Filter menus presented by day and meal, and allow user to choose different days
    - Database
      * Query cafeteria\_nutrition table to provide information about cafeteria options
  + Dashboard
    - Presentation Interface -- see Design folder
    - Business Logic
      * SQL query logic to filter students being viewed
      * Algorithm to order students in the homepage by most recently active
    - Database
      * Query students, cafeteria\_nutrition, and meals tables to provide information about each student
  + Individual Student Landing Page
    - Presentation Interface -- see Design folder
    - Business Logic
      * Order meals by day
      * Send messages and add notes to meals
    - Database
      * Query students, cafeteria\_nutrition, and meals tables to provide progress on daily goals
      * Query students, cafeteria\_nutrition, and meals tables to provide meal breakdown of daily basis
  + Change Daily Nutrient Targets
    - Presentation Interface -- see Design folder
    - Business Logic
      * Several nutrition checks to assert updated nutrition goals are valid
      * Re-update views on the Dashboard and Individual Student Landing page pertaining to daily progress
    - Database
      * Query students table to see current goals
  + Progress
    - Presentation Interface -- see Design folder
    - Business Logic
      * Allow nutritionist to choose which metric to view over time
      * Toggle between “% of targets met” and “Absolute quantity consumed”
    - Database
      * Query students, cafeteria\_nutrition, and meals tables to aggregate time series data
  + Messages (if we can get here -- otherwise it’ll just be emails from nutritionist to student)
    - Presentation Interface -- see Design folder
    - Business Logic
      * Maintain messages that are sent, note whether they came from direct messages or “+Add Note”
    - Database
      * Need to spec this out

**Milestones**

* 10/19
  + Initial Team Directory, Project Overview, Timeline; weekly status meeting
* 10/26 - Midterms
  + N/A
* 11/2 - Fall Break
  + Finalize database specs
  + Set up repos with code controls and guidelines
  + Learn React and Flask
* 11/9
  + Finalize roles (we’ll see if we like specific parts of React/Flask)
  + Ishan meet with nutritionists to finalize designs
  + Set up databases with mock data
  + Dashboard - rough GUI done (no integrations)
* 11/16
  + Integrate Dashboard with database -- end-to-end functionality
  + Individual student landing page, Progress, and Change Daily Nutrient Targets - rough GUIs done
  + Navigate to screens
  + Demonstration of prototype
* 11/23
  + Integrate Progress, Individual Student Landing Page, Change Daily Nutrient Targets with databases -- end-to-end functionality
* 11/30
  + Messages GUI
  + CAS Login
  + Add email integration with “Send Message” and “+Add Note” (Individual Student Landing Page)
  + Demonstration of alpha version
* 12/7
  + Messages database integration
* 12/14
  + Demonstration of beta version
* 12/21
* 12/28
  + Ideally connect to real backend API (no more mock data)
* 1/4
* 1/9-1/11
  + Presentation
* 1/14-1/15
  + User's Guide, Programmer's Guide, Product Eval, Project Eval, source code, presentation slides (due on 1/15, the Dean's Date, at 5:00 PM)

**Risks**

* Learning React and Flask will be difficult -- may not get to Messages GUI or be able to use Redux