EC601-A2 Project

Calorie Predictor

Team:

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1. Our Product
   1. Product Mission:

* We are offering a product for anyone who wants to have more control over how many calories they are consuming. Our app will allow a user to easily and quickly upload pictures of their meals and let them know how many calories they will be eating.
  1. User Stories:
* As a bodybuilder, I would like to know my daily calorie intake in order to perform better in my sport.
* As a very busy person, I would like to easily log my daily calories in order to live a healthier life.
* As a researcher, I would like to provide an easy way for my subjects to log their diets and send me their data in order to perform studies.
  1. Similar Products
     1. Food mama
        1. Pros:
* Easy for user to log their food
* Uses machine learning algorithms to classify the type of food
  + - 1. Cons:
* Hard to accurately predict calories for complex dishes
* Requires user input for precise results
  + 1. My Fitness Pal
       1. Pros:
* Very precise calories, macro and micro nutrient count.
* Allows barcode scan for processed foods
* Access to large database of food and restaurant dishes
  + - 1. Cons:
* Cumbersome to create recipes, and log every food item
* The user needs to know exactly what he is eating
  1. Patent Analysis

1. System Design
   1. MVP

* A mobile app in IOS or Android
* Asks the user to select the type of food category(Pizza, Burger, Salads)
* Take food image as input
* Predicts calories using ML
  1. Major Concerns
* Labeling of data
* Finding data
* Food 101 Kaggle
* FoodDD from University of ottawa
* Yelp data set
  1. Technologies
* Neural Network options: AlexNet, ResNet
* PyTorch - beginner friendly, lots of tutorials