

## **COS 420 Deliverable 0: Project Description**

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APPLICATION NAME    Black Bear Calorie Counter

APPLICATION DESCRIPTION    Calorie- and macro-counting

Black Bear Calorie Counter will be an Android application that will track calories and macronutrients (carbohydrates, fats, and protein) on a daily basis. Unlike many existing applications, Black Bear Calorie Counter will not operate with the assumption that its users wish to *lose* weight; goals for weight gain and maintaining a current weight will be supported as well. Further, macronutrient tracking will help users accomplish their weight goals in a more healthful way, e.g., those gaining weight may wish to ensure they are getting those extra calories from unsaturated fats instead of carbohydrates, and users losing weight may not wish to limit their protein intake too much if they are also weightlifting. Black Bear Calorie Counter will allow users to set a minimum or maximum calorie intake as well as what percentage of those calories should come from each macronutrient, and real-time statistics and graphs will assist users in meeting their goals each day. Notifications will alert users that they have met (or not met) a goal for the day.

Food input will be supported in two ways: barcode scanning for packaged foods and a search box for bulk foods and restaurant outings. In both cases, nutritional information will be acquired from the USDA's FoodData Central<sup>1</sup>, a database of nutrient and food component data of every food product sold within the United States in both grocery stores and restaurants. (This US-only database will unfortunately limit our application's usefulness outside the United States.) During application setup, users will select their preferred way of measuring food, either by eyeballing standard serving sizes or measuring precise amounts on a food scale in grams or

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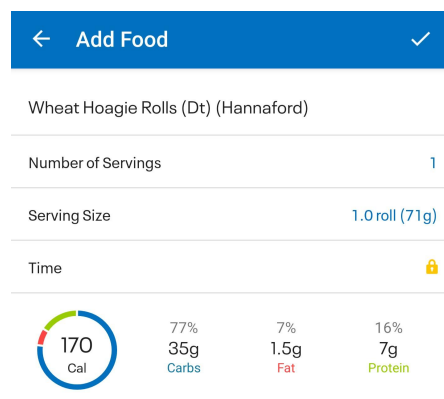
<sup>1</sup> <https://fdc.nal.usda.gov/>

ounces. In the latter case, nutritional information will be recalculated on a per-gram or per-ounce basis from FoodData Central for the user's convenience.

## Similar Applications

**MyFitnessPal** The most popular application in the calorie-counting arena is MyFitnessPal, available for iOS and Android. Unlike Black Bear Calorie Counter, MyFitnessPal equates “fitness” with weight loss and designs its interface around that concept. Even after expressing a desire to gain weight in the application setup, MyFitnessPal will turn the net calorie count *red* after exceeding the calorie-intake goal for the day. Additionally, MyFitnessPal will notify users that a calorie-intake goal has been exceeded, but it will not notify users toward the end of the day that a calorie-intake goal has not been met. Like Black Bear Calorie Counter, MyFitnessPal allows percentage thresholds for macronutrient intake, but unlike Black Bear Calorie Counter, this feature is restricted to MyFitnessPal premium users.

MyFitnessPal undoubtedly uses the same FoodData Central database as Black Bear Calorie Counter will use; comparisons between MyFitnessPal and FoodData Central were identical for over a dozen items in our testing. However, unlike Black Bear Calorie Counter, MyFitnessPal does not normalize serving sizes to the units that food-scale users prefer. For example, over the course of one meal, a user may have to input foods in grams, ounces, or even multiples of serving sizes such as “2.5 Tbsp.” Since suggested serving size on *every* US nutritional label must be also given in grams<sup>2</sup>, per-gram and per-ounce nutritional information is computationally simple, and MyFitnessPal's refusal to compute these values is a major hindrance to food scale users.



Add Food	
Wheat Hoagie Rolls (Dt) (Hannaford)	
Number of Servings	1
Serving Size	1.0 roll (71g)
Time	🔒
<div><div><div>170</div><div>Cal</div></div><div><div>77%</div><div>35g</div><div>Carbs</div></div><div><div>7%</div><div>1.5g</div><div>Fat</div></div><div><div>16%</div><div>7g</div><div>Protein</div></div></div>	

*Entry in MyFitnessPal without a per-gram serving option*

<sup>2</sup> <https://www.fda.gov/food/new-nutrition-facts-label/how-understand-and-use-nutrition-facts-label>

**Carb Manager** Another similar application is named Carb Manager: Keto Diet Tracker & Macros Counter. This is an app that has built-in listings for all kinds of different foods, and holds the information for the amount of carbs, fats, sugars, etc they hold for a certain amount of servings. It also calculates your daily intake for everything that you input per day, and shows you how much you have had on an individual day basis, keeping track of when you start inputting data. Carb Manager, like MyFitnessPal, is catered to those who wish to lose weight – specifically, those who wish to lose weight via a ketogenic diet. Black Bear Calorie Counter, however, will not suggest that users should follow a certain diet; it will merely present the statistics of food that has been consumed throughout the day and allow users to make their own judgment on what – if any – food should be consumed next.

**MyPlate** Finally, another similar application is named MyPlate. This is a simple application that shows progress towards goals, allows you to keep track of your daily intake, and even make goals. A similarity it has to ours is that it has the macros for foods listed, and shows a breakdown of the carbohydrates, fats, and protein you have eaten in the day.

## Limited Scope

In contrast to all the above applications, Black Bear Calorie Counter does not aim to be a “lifestyle” application incorporating exercise, meditation, and recipes. We aim to allow easy calorie and macro counting – especially with the most precise method available, a food scale. Additionally, we wish to provide users with beautiful graphs and statistics to track how well they are sticking to their self-defined goals, but we will not impose goals on them.