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## Food Categorization - Abstract

Due: 11:59PM 11/3/2014

In this project, we present a method for categorizing various foods into known food groups by using supervised learning. A food with details such as name, nutritional information, method of cooking, serving size, and description can be classified into a particular food group. In order to accomplish this, we used the food data prepared and provided by the United States Department of Agriculture (USDA) to build features for such a classifier. We will implement our method to 90% of the USDA food data to train the data. Then we will use the rest 10% of the data to test and predict the food group a food belongs in based on particular criteria. We hypothesize that we can achieve 95% accuracy of the food group assignment with the proper constraints imposed on the USDA food data. Our implementation will employ multiple Machine Learning techniques and compare their results to one another. We will use the following Machine Learning techniques: neural network, genetic algorithm, and naïve-Bayesian.