UMD Information Challenge 2024

USNA Team IC24030 Abstract

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USDA FDC Data Set Abstract

The United States Department of Agriculture has a site that provides analytical food data to the public, known as FoodData Central (FDC), which analyzes various foods. However, it is very expensive to perform these in-depth nutrient analysis on every possible food, as each process costs $50,000. FDC wants to know which foods have changed the most, so that they can plan their analysis.

To start answering this question, our team conducted statistical analysis of both the Foundation Foods and the SR Legacy data types. We wanted to see if the change from the SR data to the FF data was significant. To do this, we took the difference of the means from the two data sets, and standardized them by dividing by the standard deviation of each nutrient across all food types. From that analysis, we found the foods that needed to be observed. Then we followed a similar process with the specific nutrients to see if any patterns appeared.