Fast Food Data Final Project

Tools Used

I constructed this data exploration in Jupyter Notebook, using Python. There were a couple different packages I used, such as Pandas, Matplotlib, and Seaborn. Pandas is used for manipulating the data and cleaning the dataset. The Matplotlib is used creating graphs and visuals to help answer questions. Finally, Seaborn is used to enhance the graphics and give more information on the statistics of the data.

Questions Asked

I asked 5 questions for this project, being

1. Which restaurant's foods have the highest average calories across their menu?
2. What food across all restaurants has the highest amount of protein with the least amount of calories?
3. Which chicken items have the least amount of total fat per calorie across all restaurants?
4. What is the average nutritional value of each restaurant?
5. Which restaurant has the "healthiest" burger? (defined as low fat, cholesterol, and sodium, with high protein)

Insights

The insights that i discovered regarding these questions is as follows :

1. **High-Calorie Restaurants:** Burger King and McDonald's tend to have foods with higher average calorie counts.
2. **High Protein/Low Calorie:** The "Ultimate Chicken Club" from Sonic has the highest protein-to-calorie ratio.
3. **Low Fat Chicken:** The ‘6 inch Sweet Onion Chicken Teriyaki’ from Subway has the lowest amount of total fat per calorie among chicken items.
4. **Average Nutrition:** A table was generated showing the average values for calories, fat, sodium, carbs, protein, and other nutritional components for each restaurant.
5. **Healthiest Burger:** The "Rodeo Burger" from Burger King was identified as the "healthiest" burger based on the defined criteria.

Recommendations

There are a few recommendations I would give to a client regarding this data. I can highlight a couple of the healthy options to someone such as the 6 inch Sweet Onion Chicken Teriyaki sub from Subway. If that doesn't interest them, I can also easily give the list of the average nutritional value of each restaurant. For example, if someone was looking to eat at a restaurant with lower total fat items, this research can easily be used to give that information to someone. Likewise, this dataset can also be used for the fast-food businesses themselves to show that they need to add more healthier options, along with trying to make their current food items healthier.

Future work

There is a number of things that you can do with this data to analyze it further in the future. Fast food companies are coming out with new menu items each year, and they can be added to this dataset. On a bigger picture, only 8 fast food restaurants were used in this dataset. Simply expanding the number of restaurants could give more insight into the fast-food industry. I would personally like to use this data to see how the food items and nutrional value change over time. For example, how much total fat was in the McDonalds hamburgers 20 years ago compared to today?