

McDonalds Data Analysis



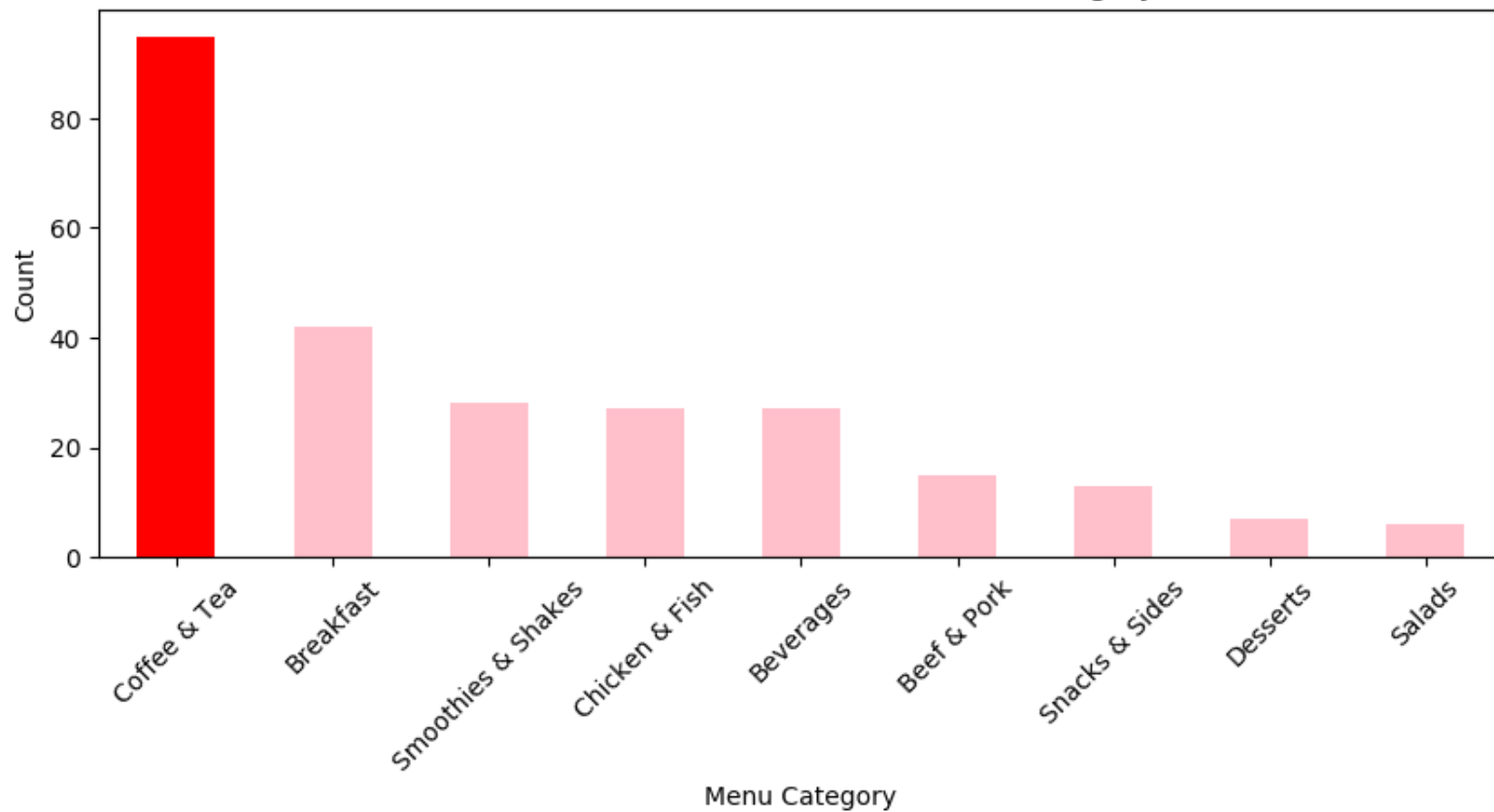
This project analyzes the nutritional value of the popular restaurant, McDonalds. Roy Kroc, the former CEO of Mcdonalds was an American business man with the dream of creating a fast food restaurant with consistent high quality food. This dataset provides a nutrition analysis of every menu item on the US McDonald's menu, including breakfast, beef burgers, chicken and fish sandwiches, fries, salads, soda, coffee and tea, milkshakes, and desserts. The menu items and nutritional facts were scraped from the McDonald's website.

The McDonald's restaurant has 9 categories in their menu of 260 different items and they are:

- Coffee & Tea
- Breakfast
- Smoothies & Shakes
- Chicken & Fish
- Beverages
- Beef & Pork
- Snacks & Sides
- Desserts
- Salads

Most of McDonald's menu fall under the Coffee and Tea category. The category with the least amount of items is Salads with only 6 items in the Menu.

Number of Menu Items for each Food Category



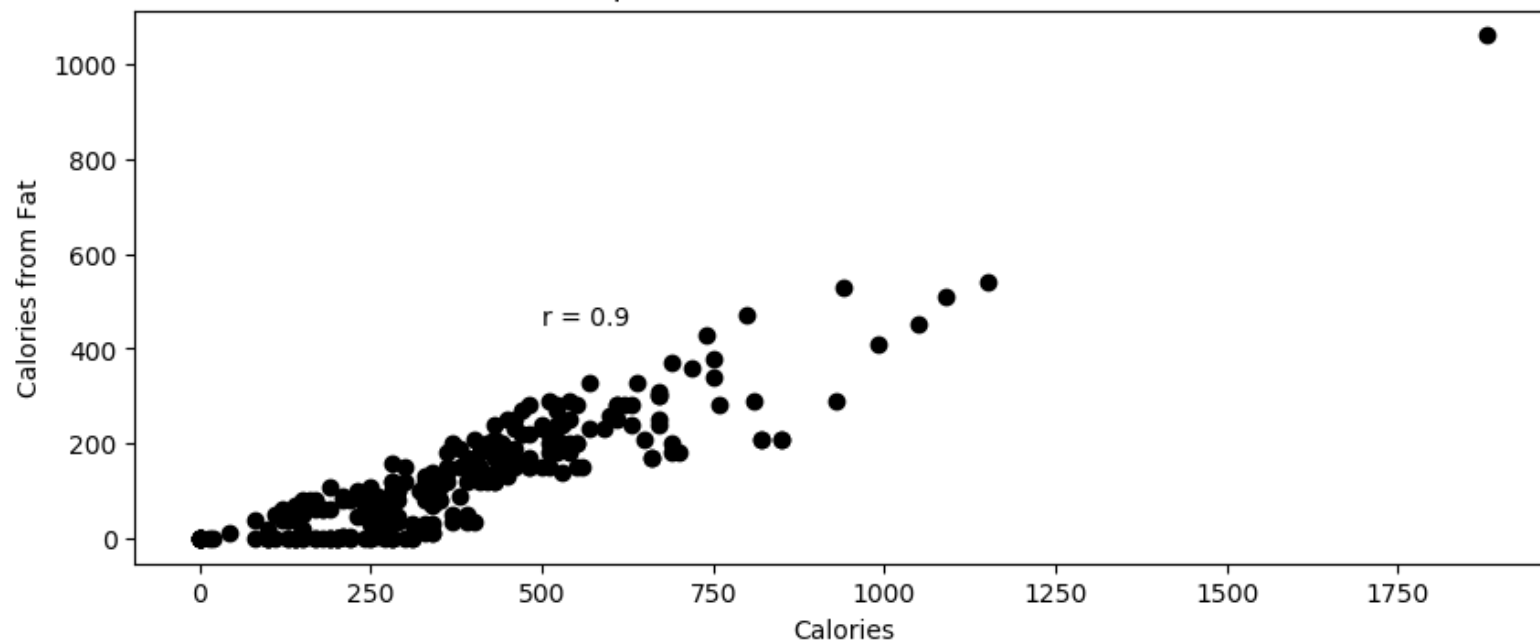
Fats and Carbohydrates



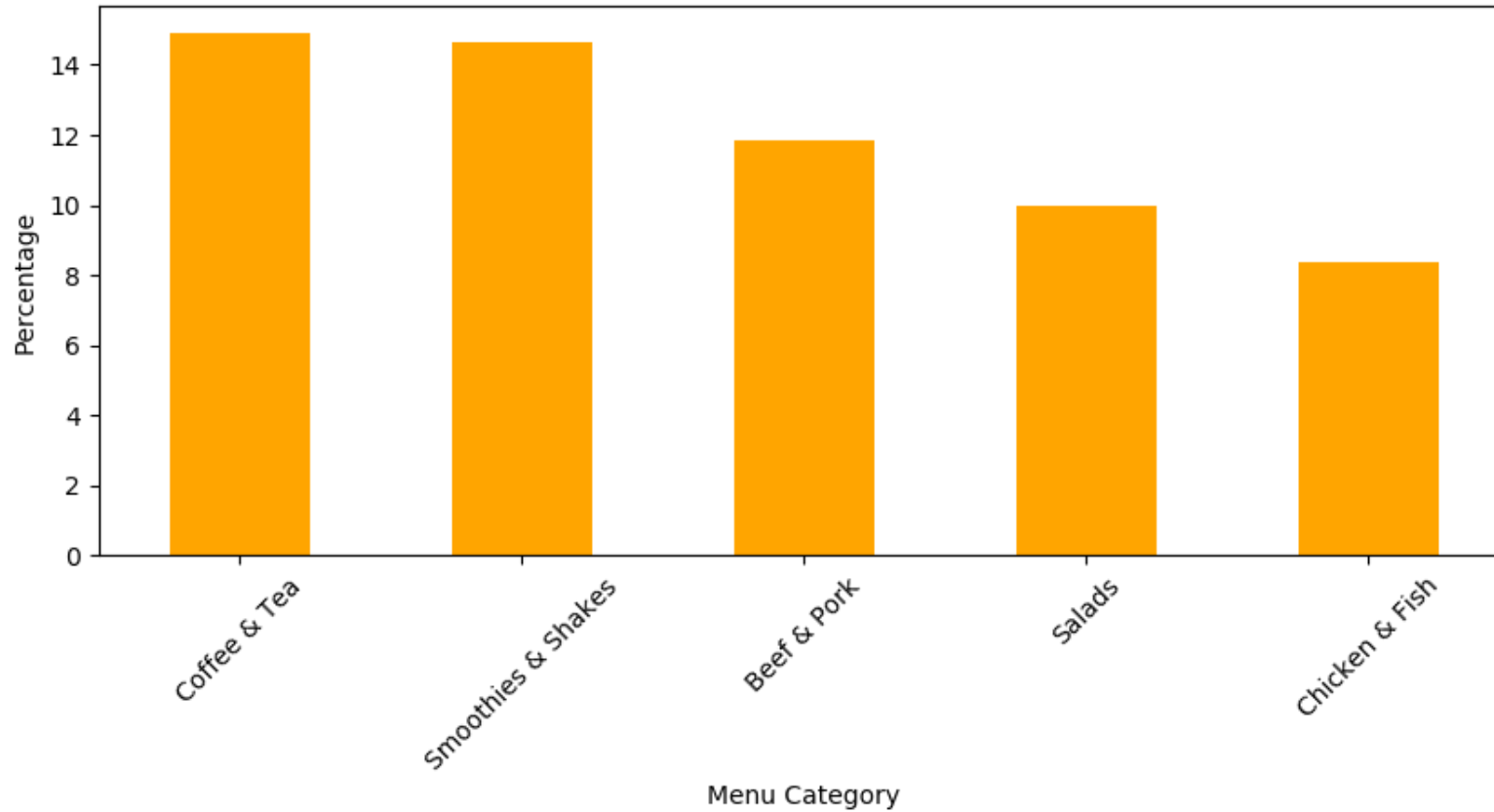
According to the Harvard School of Public Health, instead of promoting foods with low at in calories. It is important to note that healthy fats are not only beneficial but necessary for health. Generally, there is no relationship between the percentage of calories from fat and major health hazard. Fats can be categorized into three:

- Unsaturated Fats. These cateory of fats are good for the health and have a lower disease risk. E.g. Vegetable Oil, Fish, Nuts, Seeds etc.
- Trans Fats These are bad fats and increase disease risk even when consumed in small quantities
- Saturated Fats These are not as harmful as Trans fat bt can be harmful if not taken in moderation. The Dietary Guidlines for America indicates that saturated fat should not be more than 10% of daily calories and the AMA (American Health Association) recommends aiming for a dietary pattern that achieves 5% to 6% of calories from saturated fats.

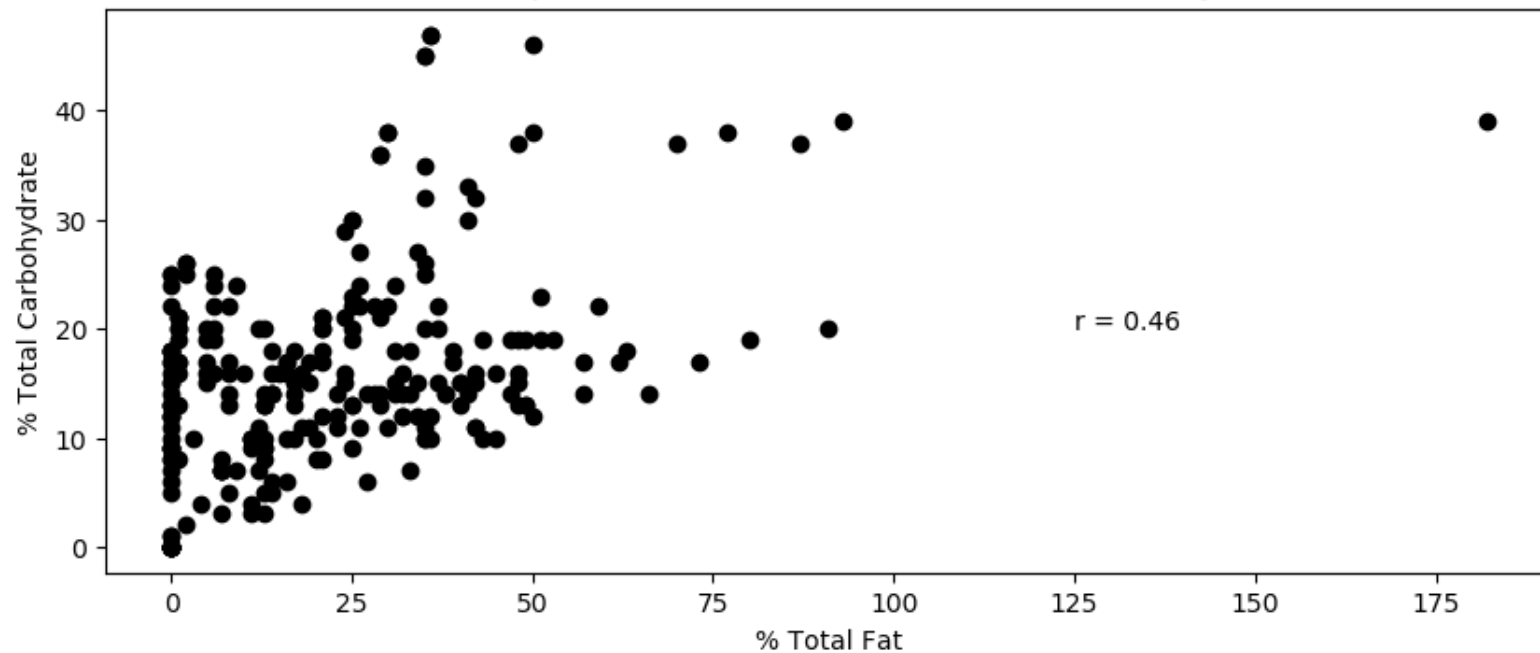
Relationship between Calories and Calories from Fat



Top 5 food categories with the highest % Saturated Fat



Relationship between % Total Fat and % Total Carbohydrate



- There is a strong relationship between Calories and Calories with fat. Hence, food items with high caloric content tend to also have a high calories with fat content.
- Generally, McDonalds foods have low trans fat which is good.
- The Smoothies and Shakes Menu Category had the highest saturated fat content. Upon analysis, it was discovered that while Fruit shakes had no saturated fat. However, milk Shakes, Chocolate Shakes, Shamrock and McFlurry shakes had high saturated fat with McFlurry at the top of the list.
- Whereas ordinary tea & coffee have no saturated fat, drinks with mocha, latte and chocolate have a high saturated fat content.

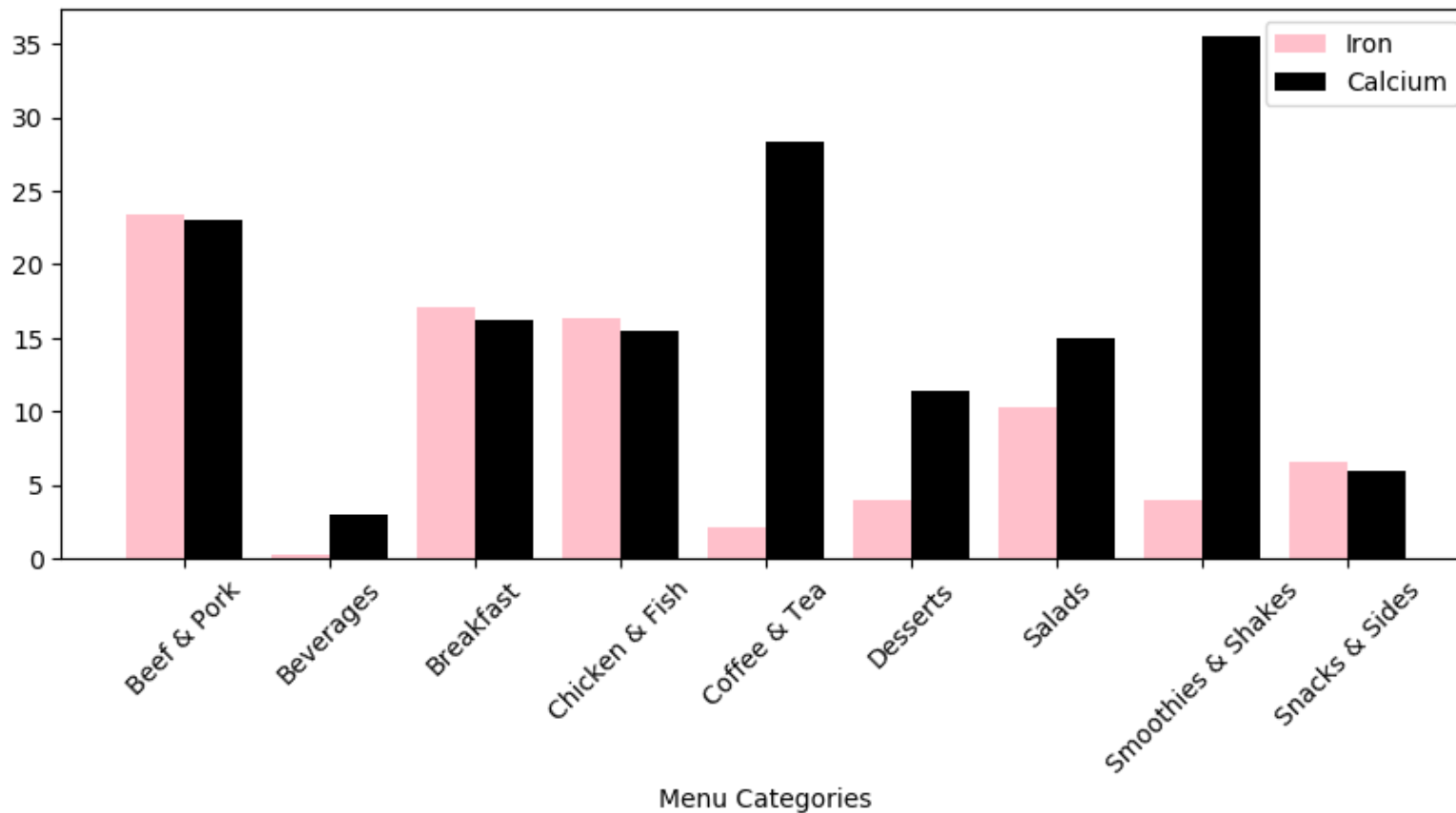
- All the menus under Beef and Pork have a high %saturated fat content between 10% and 14%.
- The Premium Bacon Ranch Salad and Southwest Salad are the only salads with high %saturated fat.
- With the exception of McWrap Chicken, most of the food items under the Chicken and Fish menu category have low %saturated fat.
- According to Harvard School of Public Health, in an attempt to reduce fat, most food manufacturers replace it with carbohydrate. In view of this, the analysis of the % Total Carbohydrate in Mcdonald's foods was analyzed and it was discovered that on average, Mcdonald's foods are low carbs. Also, there is a weak relationship between carbohydrate and fat in the food items.

Vitamins & Minerals



- Vitamin A is an essential vitamin because it protects the eyes, lowers risk of diseases by supporting the immune system, promotes healthy growth etc. Of all the food categories, the Salad category has the highest amount of Vitamin A followed by Chicken & Fish, Smoothies & Shakes.
- Vitamin C is also an essential vitamin useful for boosting immunity, managing high blood pressure etc. Mcdonald's foods are richer in Vitamin A than in Vitamin C. Salads, Snacks and Sides and Beverages are the food categories with the highest amount of Vitamin C.
- Apple Slices have the highest amount of Vitamin C in the Snacks category. The Mcdonald's french fries are also rich in Vitamin C because Potato is a rich source of Vitamin C.
- For the beverage category, with the exception of Apple and Orange Juices which are very rich in Vitamin C, all the other beverages & drinks (e.g. Coke, Sprite) are very low in Vitamins

Distribution of Iron and Calcium in McDonald's Foods



- Shakes (fruit shakes, milk shakes etc.), coffee and tea are rich in calcium but low in iron
- Menu categories rich in Animal protein (Beef & Pork, Chicken & Fish) are rich in both Iron and Calcium
- Mcdonald's beverages are very low in Calcium and Iron.

Summary

This analysis provides a walkthrough the McDonald's Menu list and the nutritional value of each food category in the list. Based on this analysis, you can decide which food to opt for depending on your preference or nutritional needs.

A lot of McDonald's foods are rich in Vitamins (Vitamin A & C) especially Salads. Also, most foods are low in carbohydrate with little or no trans-fat which is a plus. However, a lot of foods are high in Saturated fat, hence, it is important to check for foods with low Saturated fat (>10%) in case you are cutting on your fat intake. The analysis also covers essential minerals such as Calcium and Iron and it was noted that foods in the menu containing milk or animal protein are very rich in calcium.