# Data Analysis Project on

# McDonald's Open Data Set

McDonald's Corporation is an [American](https://en.wikipedia.org/wiki/United_States)-based [multinational](https://en.wikipedia.org/wiki/Multinational_corporation) [fast food](https://en.wikipedia.org/wiki/Fast_food) [chain](https://en.wikipedia.org/wiki/Chain_store), founded in 1940 in [San Bernardino, California](https://en.wikipedia.org/wiki/San_Bernardino,_California), United States. McDonald's is the world's largest [restaurant chain](https://en.wikipedia.org/wiki/Restaurant_chain) by revenue serving over 69 million customers daily in over 100 countries in more than 40,000 outlets as of 2021.  McDonald's is best known for its [hamburgers](https://en.wikipedia.org/wiki/Hamburger), [cheeseburgers](https://en.wikipedia.org/wiki/Cheeseburger) and [french fries](https://en.wikipedia.org/wiki/French_fries" \o "French fries), although their menus include other items like chicken, fish, fruit, and salads. McDonald's has been subject to criticism over the health effects of its products.

Key highlight of McDonald’s is that customers can select any item to view the complete nutritional information including calories, fat, sodium and Weight Watchers points. Customers can use calorie filter to find the McDonald’s menu item that best fits your diet.

**Problem statement :**

Ray Kroc wanted to build a restaurant system that would be famous for providing food of consistently high quality and uniform methods of preparation. He wanted to serve burgers, buns, fries and beverages that tasted just the same in Alaska as they did in Alabama. To achieve this, he chose a unique path: persuading both franchisees and suppliers to buy into his vision, working not for McDonald’s but for themselves, together with McDonald’s. Many of McDonald’s most famous menu items – like the Big Mac, Filet-O-Fish, and Egg McMuffin – were created by franchisees.

Analysis the given dataset and make different predictions and draw meaningful conclusion so that it should be benificial for both company as well as customer. Also state what can we learn from different predictions. Prepare the report which can show how the customer could plan their meal.

**About Dataset :**

Given dataset contains different food items with their fat, calories, cholesterol, carbohydrates, sodium, dietary fibre, sugar, proteins, vitamins contents. McDonalds provides 9 different food category which contains 260 different food items. Table in the given dataset contains 260 rows and 24 columns. It means that there is no duplicate values in the given dataset.

**Table contains following columns :**

Category : This column contains different food categories under food items distributed.

Item : Several food items provided by MacDonald’s.

Serving Size : Serving size of food items such as small, medium, large.

Calories : Calorie value of the food item.

Calories from Fat : Calorie value contribution due to fat.

Total Fat : Total fat value of the food item.

Total Fat (% Daily Value) : Percentage of daily acceptable limit of total fat of the food item.

Saturated Fat : Saturated fat value of the food item.

Saturated Fat (% Daily Value) : Percentage of daily acceptable limit of saturated fat of the food item.

Trans Fat : Trans fat value of the food item.

Cholesterol : Cholesterol content in the food item.

Cholesterol (% Daily Value) : Percentage of daily acceptable limit of cholesterol in the food item.

Sodium : Sodium content in the food item.

Sodium (% Daily Value) : Percentage of daily acceptable limit of sodium in the food item.

Carbohydrates : Carbohydrate content in the food item.

Carbohydrates (% Daily Value) : Percentage of daily acceptable limit of carbohydrate in the food item.

Dietary Fiber : Dietary fiber content in the food item.

Dietary Fiber (% Daily Value) : Percentage of daily acceptable limit of dietary fiber in the food item.

Sugars : Sugar content in the food item.

Protein : Protein content in the food item.

Vitamin A (% Daily Value) : Vitamin A content in the food item.

Vitamin C (% Daily Value) : Vitamin C content in the food item.

Calcium (% Daily Value) : Calcium content in the food item.

Iron (% Daily Value) : Iron content in the food item.

**Inspiration**

* How many calories does the average McDonald's value meal contain?
* How much do beverages, like soda or coffee, contribute to the overall caloric intake?
* Does ordered grilled chicken instead of crispy increase a sandwich's nutritional value?
* What about ordering egg whites instead of whole eggs?
* What is the least number of items could you order from the menu to meet one day's nutritional requirements?

**Questions :**

1. What is the average nutrition values per category ?
2. Which food items contains maximum amount of protein and less amount of fat ?
3. Which food items contribute to high sodium intake ?
4. Which category contribute to maximum % of Cholesterol in a diet (% daily value) ?
5. Which 4 food items contain the most amount of Saturated Fat?
6. Which food category and which food item contains maximum vitamins content ?
7. Among chicken/fish and beef/pork, which food category is best for maximum protein intake ? why ?
8. Among breakfast and salad which food category is good for daily nutrition fulfillment ?
9. Adding beverage or tea to the meal, will it make significance difference to nutrition value ?

**Business benefits of the analysis :**  
By analyzing nutrition value of the food items by the MacDonald’s, it will be easier to the customer to plan their meal according to their requirement. This analysis report can attract to the customer who is very health conscious and believe in the past criticism of the MacDonald about unhealthy food items. Customer who is on special diet due to different health problems such as overweight, vitamins deficiency anemia etc can also enjoy the MacDonald’s food items by checking nutrition values of the food items. This report may lead to company revenue growth. Also company reputation and legacy may save from further criticism over the food.