Cereal Nutrientvalue

Home

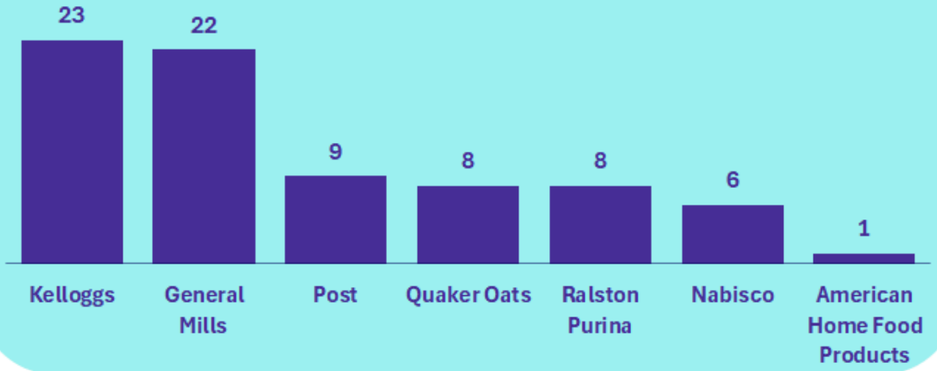
Details

Filters

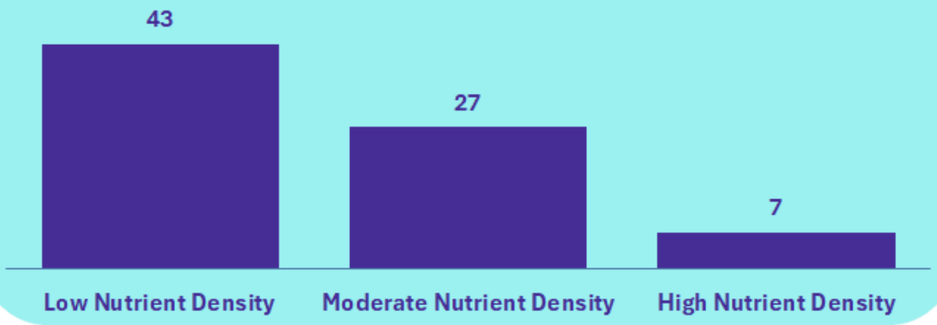
Total Manufacturer **7**

Total Products **77**

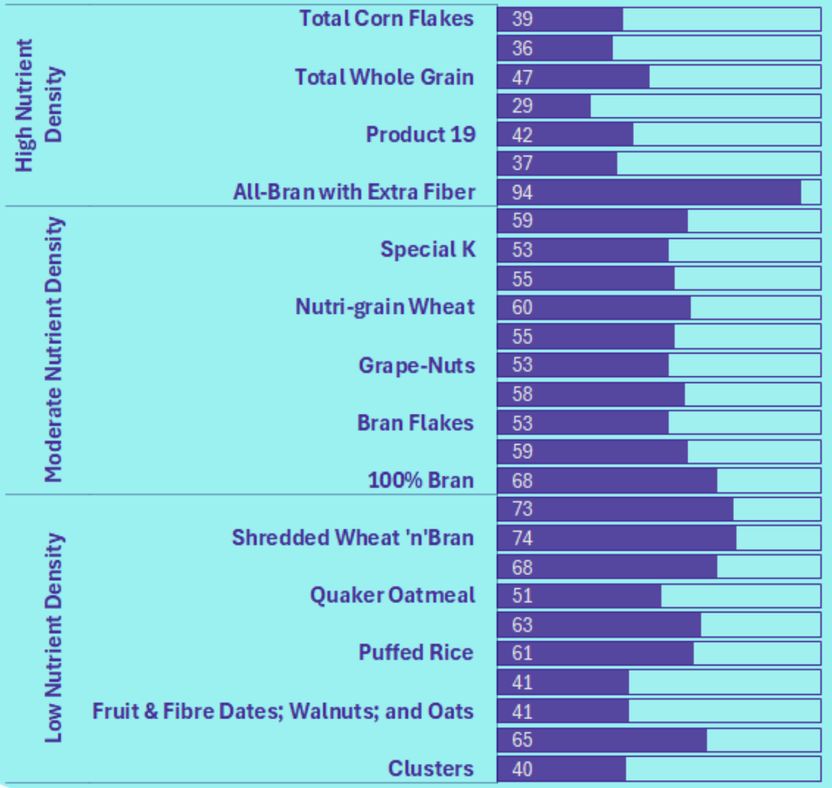
Manufacturers and Their Product Offerings



Nutrient Density Classification of Products



Customer Ratings Distribution of Products



Filters

Manufacturer

- American Home Food Products
- General Mills
- Kelloggs
- Nabisco
- Post
- Quaker Oats
- Ralston Purina

Nutrient Category

- Low Nutrient Density
- Moderate Nutrient Density
- High Nutrient Density

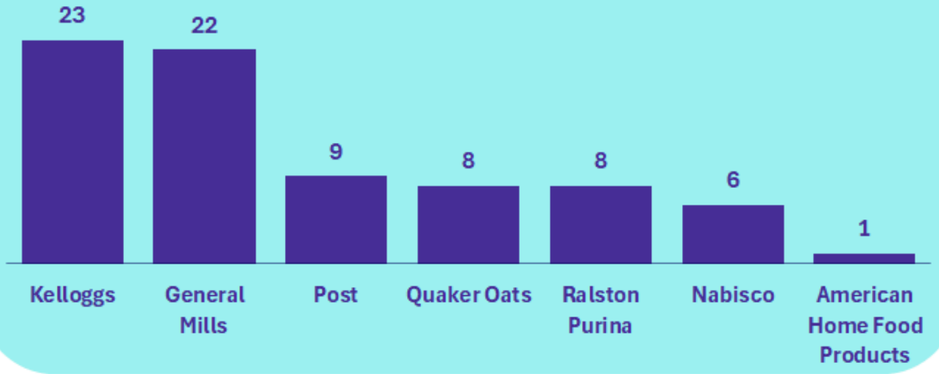
Type

- Cold
- Hot

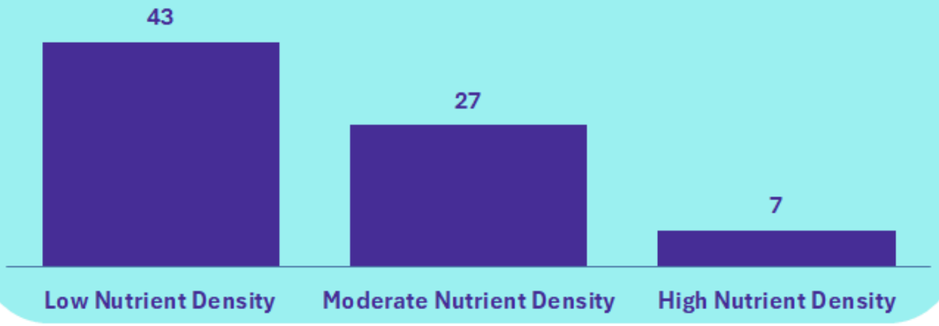
Total Manufacturer **7**

Total Products **77**

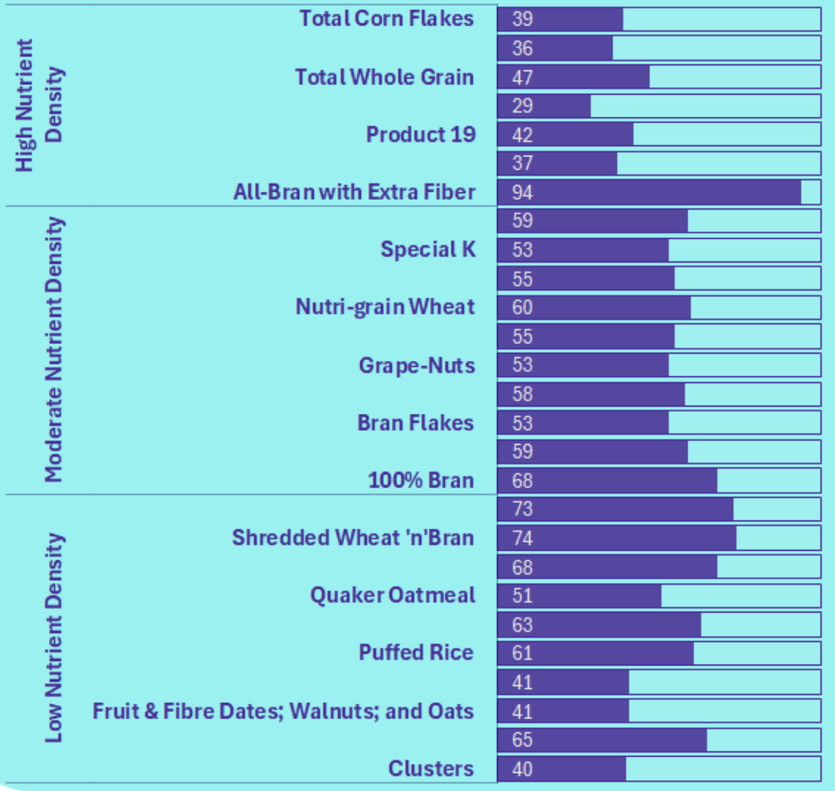
Manufacturers and Their Product Offerings



Nutrient Density Classification of Products



Customer Ratings Distribution of Products



Cereal NutrientValue

Home

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Filters

Total Manufacturer **7**

Total Products **77**

Row Labels	Rating By Customers	Portion Weight	Calories	Protein	Vitamins	Potassium	Sugars	Sodium	Complex Carbohydrate	Fats	Fibers
All-Bran with Extra Fiber	94	28	50	4	25	0.33	0	0.14	8	0	14
Shredded Wheat 'n'Bran	74	28	90	3	0	0.14	0	0	19	0	4
Shredded Wheat spoon size	73	28	90	3	0	0.12	0	0	20	0	3
Shredded Wheat	68	24	80	2	0	0.095	0	0	16	0	3
100% Bran	68	28	70	4	25	0.28	6	0.13	5	1	10
Cream of Wheat (Quick)	65	28	100	3	0	-0.001	0	0.08	21	0	1
Puffed Wheat	63	14	50	2	0	0.05	0	0	10	0	1
Puffed Rice	61	14	50	1	0	0.015	0	0	13	0	0
Nutri-grain Wheat	60	28	90	3	25	0.09	2	0.17	18	0	3
All-Bran	59	28	70	4	25	0.32	5	0.26	7	1	9
Strawberry Fruit Wheats	59	28	90	2	25	0.09	5	0.015	15	0	3
Frosted Mini-Wheats	58	28	100	3	25	0.1	7	0	14	0	3
Raisin Squares	55	28	90	2	25	0.11	6	0	15	0	2
Maypo	55	28	100	4	25	0.095	3	0	16	1	0
Grape-Nuts	53	28	110	3	25	0.09	3	0.17	17	0	3
Special K	53	28	110	6	25	0.055	3	0.23	16	0	1
Bran Flakes	53	28	90	3	25	0.19	5	0.21	13	0	5
Grape Nuts Flakes	52	28	100	3	25	0.085	5	0.14	15	1	3
Wheaties	52	28	100	3	25	0.11	3	0.2	17	1	3
Quaker Oatmeal	51	28	100	5	0	0.11	-1	0	-1	2	2.7
Cheerios	51	28	110	6	25	0.105	1	0.29	17	2	2
Quaker Oat Squares	50	28	100	4	25	0.11	6	0.135	14	1	2
Wheat Chex	50	28	100	3	25	0.115	3	0.23	17	1	3
Bran Chex	49	28	90	2	25	0.125	6	0.2	15	1	4
Crispix	47	28	110	2	25	0.03	3	0.22	21	0	1

Filters

Manufacturer

- American Home Food Products
- General Mills
- Kelloggs
- Nabisco
- Post
- Quaker Oats
- Ralston Purina

Nutrient Category

- Low Nutrient Density
- Moderate Nutrient Density
- High Nutrient Density

Product Type

- Cold
- Hot

Total Manufacturer 7

Total Products 77

Row Labels	Rating By Customers	Portion Weight	Calories	Protein	Vitamins	Potassium	Sugars	Sodium	Complex Carbohydrate	Fats	Fibers
All-Bran with Extra Fiber	94	28	50	4	25	0.33	0	0.14	8	0	14
Shredded Wheat 'n'Bran	74	28	90	3	0	0.14	0	0	19	0	4
Shredded Wheat spoon size	73	28	90	3	0	0.12	0	0	20	0	3
Shredded Wheat	68	24	80	2	0	0.095	0	0	16	0	3
100% Bran	68	28	70	4	25	0.28	6	0.13	5	1	10
Cream of Wheat (Quick)	65	28	100	3	0	-0.001	0	0.08	21	0	1
Puffed Wheat	63	14	50	2	0	0.05	0	0	10	0	1
Puffed Rice	61	14	50	1	0	0.015	0	0	13	0	0
Nutri-grain Wheat	60	28	90	3	25	0.09	2	0.17	18	0	3
All-Bran	59	28	70	4	25	0.32	5	0.26	7	1	9
Strawberry Fruit Wheats	59	28	90	2	25	0.09	5	0.015	15	0	3
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Grape-Nuts	53	28	110	3	25	0.09	3	0.17	17	0	3
Special K	53	28	110	6	25	0.055	3	0.23	16	0	1
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Quaker Oat Squares	50	28	100	4	25	0.11	6	0.135	14	1	2
Wheat Chex	50	28	100	3	25	0.115	3	0.23	17	1	3
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Crispix	47	28	110	2	25	0.03	3	0.22	21	0	1

80 CEREALS

Task 2 with CognoRise InfoTech

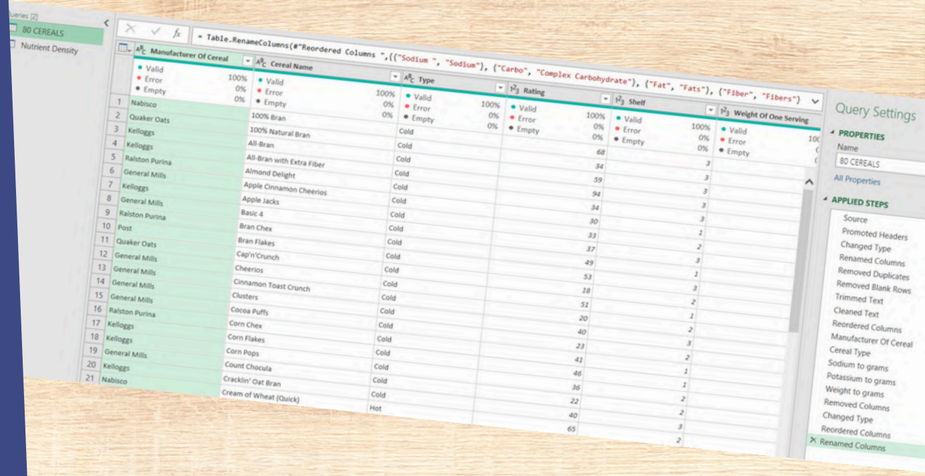
By Kareem Shaaban

INTRODUCTION

This project analyzes the nutrient density of various cereal products, focusing on their nutritional value relative to calorie content. By categorizing cereals into high, moderate, and low nutrient density, it reveals surprising insights that may challenge popular perceptions. Through data cleaning and analysis, the project explores product distribution by manufacturer, type, and customer ratings, providing valuable information for both consumers and manufacturers.

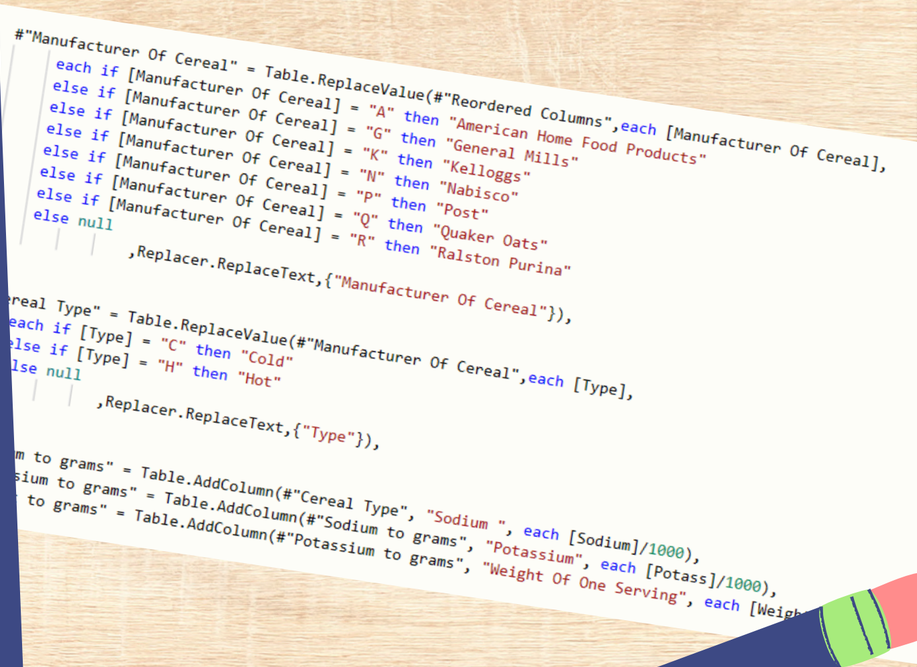
CLEANING & GATHERING

- Loading Data: Imported raw data into Power Query for preprocessing.
- Column Renaming: Renamed columns for better clarity and consistency.
- Removing Duplicates and Blanks: Eliminated duplicate entries and blank rows to ensure data quality.
- Text Cleaning: Trimmed and cleaned text columns to remove any extra spaces or formatting issues.
- Value Replacement: Replaced certain values in columns, such as "manufacturer" and "cereal type," for consistency.



CLEANING & GATHERING

- Unit Standardization: Converted all measurement units to a standard unit, "grams."
- Data Type Conversion: Changed column data types to appropriate formats for further analysis.
- Query Duplication: Duplicated the query to create an additional dimension for calculating the nutrient density ratio for each element, based on the formula: element amount in grams / calories.
- Column Pruning: Removed unnecessary columns in the new query to streamline calculations.



```
#"Manufacturer Of Cereal" = Table.ReplaceValue(#"Reordered Columns",each [Manufacturer Of Cereal],
    each if [Manufacturer Of Cereal] = "A" then "American Home Food Products"
    else if [Manufacturer Of Cereal] = "G" then "General Mills"
    else if [Manufacturer Of Cereal] = "K" then "Kelloggs"
    else if [Manufacturer Of Cereal] = "N" then "Nabisco"
    else if [Manufacturer Of Cereal] = "P" then "Post"
    else if [Manufacturer Of Cereal] = "Q" then "Quaker Oats"
    else if [Manufacturer Of Cereal] = "R" then "Ralston Purina"
    else null
            ,Replacer.ReplaceText,{"Manufacturer Of Cereal"}),

real Type" = Table.ReplaceValue(#"Manufacturer Of Cereal",each [Type],
each if [Type] = "C" then "Cold"
lse if [Type] = "H" then "Hot"
lse null
            ,Replacer.ReplaceText,{"Type"}),

m to grams" = Table.AddColumn(#"Cereal Type", "Sodium ", each [Sodium]/1000),
ium to grams" = Table.AddColumn(#"Sodium to grams", "Potassium", each [Potass]/1000),
 to grams" = Table.AddColumn(#"Potassium to grams", "Weight Of One Serving", each [Weigh
```

CLEANING & GATHERING

- Nutrient Density Score Calculation: Added a new column to calculate the nutrient density score for each product using the following formula:

Nutrient Density Score=W1 · Protein Density+W2 · Fiber Density.....so on

Where "W1, W2, W..." represent the relative importance of each nutrient, calculated as follows:

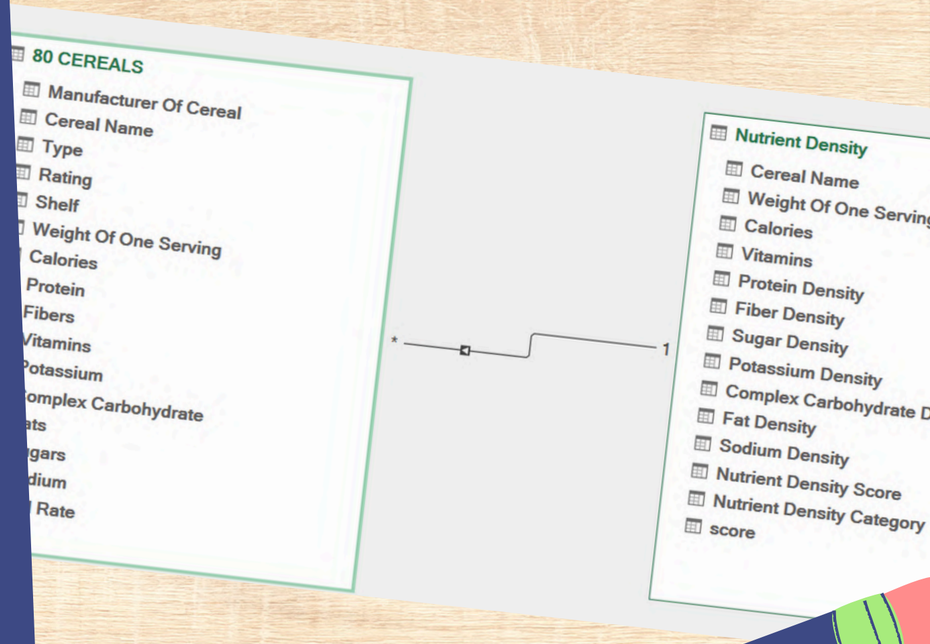
Protein Weight = 3
Fiber Weight = 2
Vitamin Weight = 1.5
Complex Carbohydrates Weight = 1
Fats Weight = -1
Sodium Weight = -1.5
Sugar Weight = -2

```
"Added Custom" = Table.AddColumn(#"Removed Blank Rows1", "Protein Density", each [Protein]/[Calories]),
"Added Custom1" = Table.AddColumn(#"Added Custom", "Fiber Density", each [Fiber]/[Calories]),
"Added Custom2" = Table.AddColumn(#"Added Custom1", "Sugar Density", each [Sugars]/[Calories]),
"Added Custom3" = Table.AddColumn(#"Added Custom2", "Potassium Density", each [Potassium]/[Calories]),
"Added Custom4" = Table.AddColumn(#"Added Custom3", "Complex Carbohydrate Density", each [Carbo]/[Calories]),
"Added Custom5" = Table.AddColumn(#"Added Custom4", "Fat Density", each [Fat]/[Calories]),
"Added Custom6" = Table.AddColumn(#"Added Custom5", "Sodium Density", each [Sodium]/[Calories]),
"Removed Columns1" = Table.RemoveColumns(#"Added Custom6",{"Protein", "Fiber", "Potassium", "Carbo", "Fat", "Sugars", "Sodium"}),
```

```
"Added Custom8" = Table.AddColumn(#"Added Custom7", "Nutrient Density Catego
each if [Nutrient Density Score] >= 1 then "High Nutrient Density"
else if [Nutrient Density Score] >= 0.5 then "Moderate Nutrient Density"
else "Low Nutrient Density"),
```

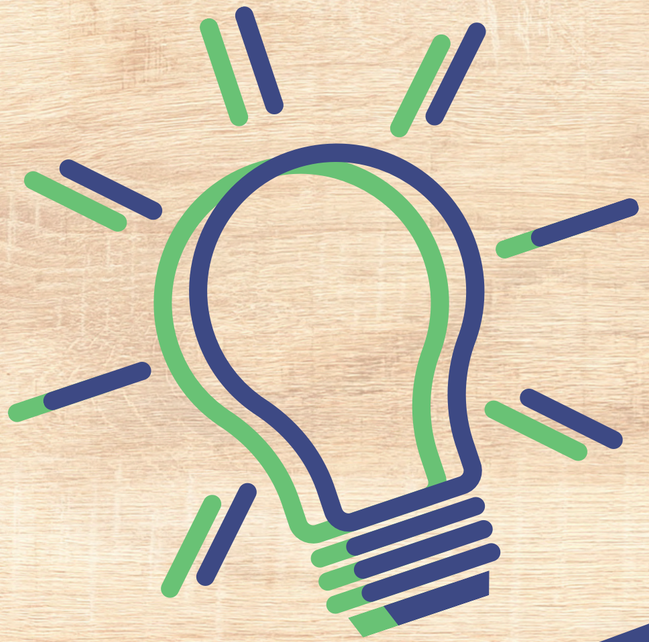
CLEANING & GATHERING

- Density Score Categorization: Added another column to classify the nutrient density score into categories:
- High Nutrient Density:
  if NutrientDensityScore >= 1
- Moderate Nutrient Density:
  if NutrientDensityScore>=0.5
- Low Nutrient Density:
  if NutrientDensityScore < 0.5
- Finalizing the Data Model: Loaded the data into the data model and established relationships between the two queries, completing the data cleaning and preparation process.



ANALYSiNG

- What are the top 5 products in each nutrient category, with a detailed view of their characteristics?
- How many products fall under each nutrient density category (High, Moderate, Low)?
- How many products belong to each product type?
- What is the weight in grams for each product portion?
- How many products are offered by each manufacturer?
- What is the distribution of products based on customer ratings?



FINDINGS

- The dataset contains 77 cereal products from 7 different manufacturers. Kellogg's is the top producer with 23 products, followed closely by General Mills with 22 products. At the bottom of the list is American Home Food Products, which offers just one product.

FINDINGS

In terms of nutrient density classification:

- Low nutrient density products dominate, with 43 items.
- Moderate nutrient density follows, with 27 products.
- High nutrient density is the least common, with only 7 products.

FINDINGS

The top-rated cereal in each nutrient category is as follows:

- Low nutrient density: Shredded Wheat with 74 points.
- Moderate nutrient density: 100% Bran with 68 points.
- High nutrient density: All Bran with Extra Fiber leading with 94 points, making it the overall top-rated product.

Only two manufacturers produced high nutrient density cereals: General Mills (3 products) and Kellogg's (4 products).

SUMMARY

This analysis of 77 cereal products across 7 manufacturers reveals that Kellogg's and General Mills dominate the market, producing the majority of cereals. However, most cereals fall into the low nutrient density category, indicating they offer less nutritional value relative to their calorie content. Only 7 products are classified as high nutrient density, produced exclusively by Kellogg's and General Mills.

SUMMARY

The top-rated product overall is All Bran with Extra Fiber with 94 points, leading in the high nutrient density category. This suggests that while most cereals aren't nutrient-rich, some stand out for their health benefits.

KEY TAKEAWAYS

- Consumers should prioritize high nutrient density cereals for better nutrition.
- Manufacturers, especially those producing low-density products, could improve their offerings by enhancing the nutritional content.

By focusing on nutrient-rich options, consumers can make healthier breakfast choices, while manufacturers can leverage this data to meet the demand for more nutritious products.

THANK YOU

Presented By Kareem Shaaban