

Your Healthy Cereal

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Questions:

- What constitutes a healthy cereal?
- Are cereals listed as organic, vegan, gluten-free, etc. healthier options?
- Are there different ingredients across healthy cereals?

Data Sources:

- [Statcrunch Cereal database](#)
- [USDA Branded Food Products database](#)
- [Walmart Cereal Products](#)



References

Code References:

[Cereal Data Analysis](#) - looked at other sources data analysis, but didn't use code

Viz References:

[Fruits & Veg visualization](#)

[Recharts](#)

[MathJax](#)

Results

Results vary on user input.

For this specific user, "100% Bran" is the healthiest cereal.

[link](#)

We want to calculate the healthiest cereals for you based on your preferences. We will calculate a health score for each cereal based on the importance of the weight you assigned for each category and the cereal's nutrition data. Please answer the questions below.

Weight

How important is it for your cereal to have **low calories?** 12.89%

Not at all important ☐ Important ☐ Very important ☐

How important is it for your cereal to have **low sugar?** 15%

Not at all important ☐ Important ☐ Very important ☐

How important is it for your cereal to have **low fat?** 12.63%

Not at all important ☐ Important ☐ Very important ☐

How important is it for your cereal to have **low sodium?** 14.74%

Not at all important ☐ Important ☐ Very important ☐

How important is it for your cereal to have **high protein?** 15.53%

Not at all important ☐ Important ☐ Very important ☐

How important is it for your cereal to have **high fiber?** 14.47%

Not at all important ☐ Important ☐ Very important ☐

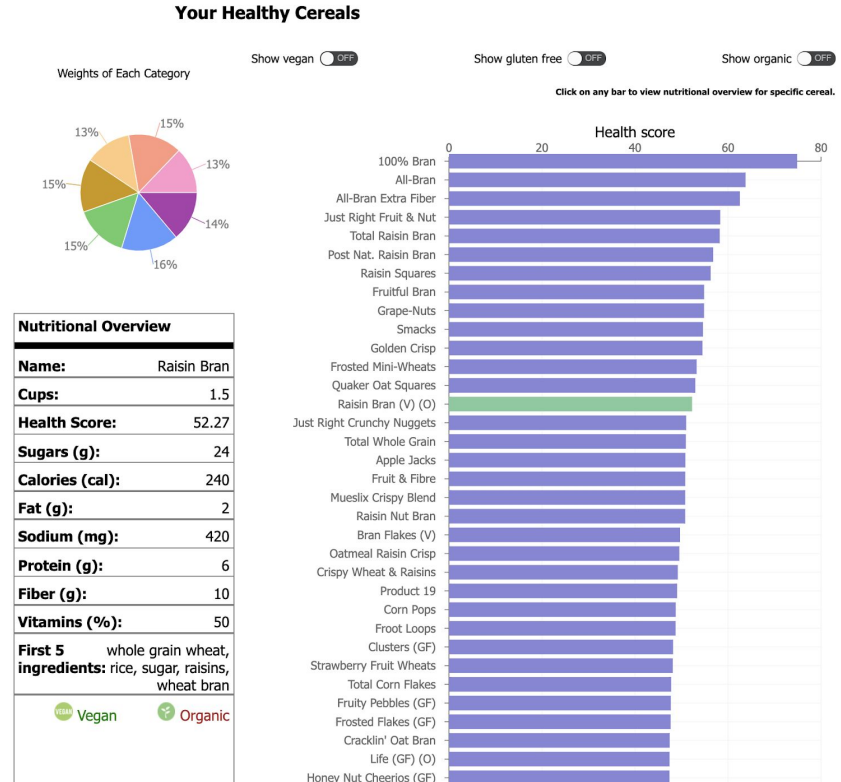
How important is it for your cereal to have **high vitamins?** 14.74%

Not at all important ☐ Important ☐ Very important ☐

Health Score Calculation

For the undesirable categories [Sugar, Fats, Calories and Sodium], we reverse the values in that category by getting the maximum value in that category then doing (maximum - value) for all values.

To calculate the health score of each cereal:



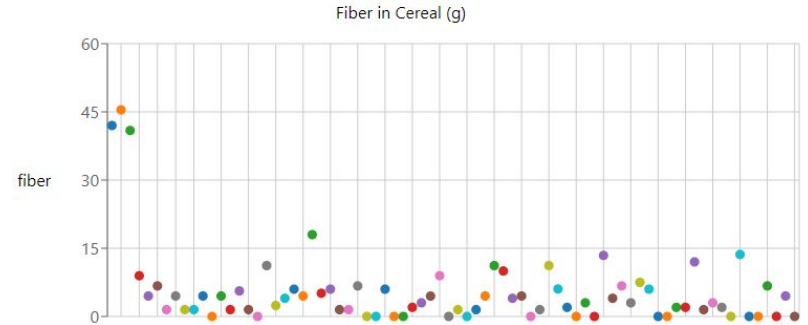
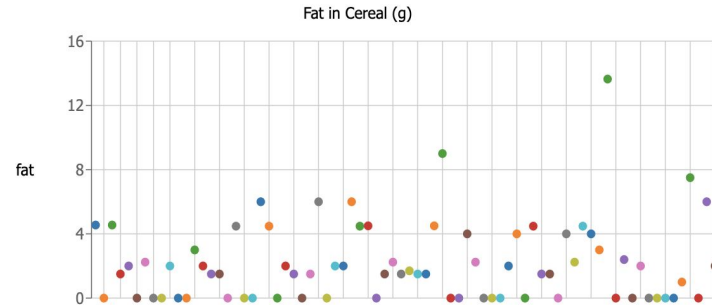
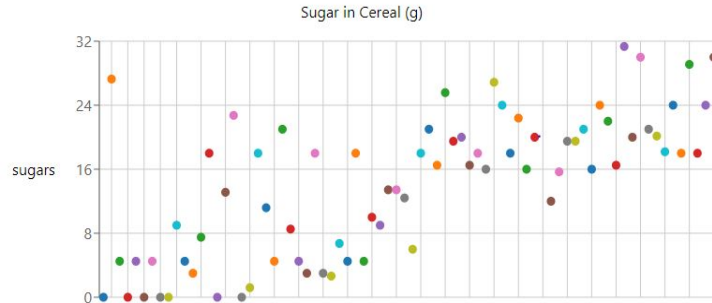
Results

Scatter plots of cleaned data(x-axis = order of Health Score)

Fiber - there are only a few outliers with high fiber towards more healthy cereals

Sugars- there is a general upward trend in sugar levels but large variations among all cereals

Fat- no conclusion can be gathered from analyzing Fat scatter plot



Libraries Used

- React
- Recharts
- MathJax
- Beautiful Soup
- Pandas

Tasks Accomplished

- Cleaned and normalized cereal datasets
- Mapped cereal names from different datasets together
- Calculated health scores for all cereals based on person's nutrition preferences
- Scraped from Walmart to get vegan, organic, and gluten free cereals
- Visualization using React

Major Challenges

- Mapping out ingredients for all cereals
- Confusing user interface design
- Complications in calculating Health Score
- Poor documentation on Recharts