80 Cereal Nutrition Content Comparison

Data Visualization Final Project

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Messaging

This web page is comparing 80 different cereal nutrition content to help user to make wise decisions on their diets.

Narrative Structure

This web page is using interactive slide show design. The users are guided by the steps (scenes) to understand more of the cereal nutrition contains. In scene number,

1. User is looking at a pie (donut) chart with different cereal manufactures listed. The large percentage of the pie represents higher numbers of cereal samples this dataset contains. Now, user should click on the pie chart to select one of their favorite manufactures. (Figure 1)
2. Now a dropdown list appears. The list contains all the cereals produced by the selected manufacture (in step 1). Now, user can select one of their favorite cereals. Then, a bar chart will display all nutrition contains of this cereal. (Figure 2)
3. To compare the nutrition contains of the selected cereal in step 2 to rest of the cereals, we are going to create a histogram of one of nutrition contains. Then, user can select other nutrition contains and the histogram will be updated. (Figure 3)

User is encouraged to select other manufactures (scene 1) to export other cereal nutrition contents (scene 2) and its comparisons with other cereals nutrition contents (scene 3).

Visual Structure

The scene is oriented from top to bottom with 1, 2, 3 steps labels. Each step and scene is labeled with proper descriptions, so user can make proper clicks and selections.

In scene 1, each pie is in different color to help user to distinguish different manufactures.

Each scene is single chart, but the chart will be updated based on user's selection. Between updates, the charts have same chart size, same font size, proper tile, and proper axis labeling, se user can navigate each scene with visual consistence. The labeling of each chart is consistent between scenes. Also, three scenes are highly connected between transitions. (Figure 1, 2, and 3)

All parameters have consistent units throughout.

Scenes

The scene is oriented from top to bottom with 1, 2, 3 steps labels. Each step or scene is labeled with proper descriptions, so user can make proper clicks and selections. The scene 1 is more like a over view of all manufactures, and the scene 2 is drill down to each cereal's nutrition contents, and scene 3 pulls

out from scene 2 and drill down to single nutrition content to build histogram for comparison. The ordering is user-directed.

The labeling of each chart is consistent between scenes. Also, three scenes are highly connected between transitions. (Figure 1, 2, and 3)

Annotations

Each scene is single chart, but the chart will be updated based on user's selection. Between updates, the old chart is cleared, and the charts have same chart size, same font size, proper tile, and proper axis labeling. Therefore, user can navigate each scene with visual consistence. (Figure 1, 2, and 3)

Parameters

In scene 1, each pie in the pie chart is labeled with polyline and labels.

In scene 2, after user selected a cereal(a dropdown list), nutrition (calories, protein (g), fat (g), sodium (mg), fiber (g), carbohydrates (g), sugars (g), potassium (g), vitamins (daily%)) and rating are labeled on x axis; numeric value is shown on y axis. Parameters are updated between selections. Also, scene 2 is animated.

In scene 3, after user selected a single nutrition content or rating (a dropdown list), x axis is updated to the selected nutrition content or rating; y axis is frequency. Parameters are updated between selections.

In scene 2 and 3, charts are based on user's selection, and tooltip is used in both scenes to help user to understand the bar chart.

Triggers

In scene 1, the pie chart will display also display. (Figure 1)

In scene 2, after a manufactory (by clicking on the pie chart) and a cereal are selected (a dropdown list), a bar chart will display all nutrition contains of the selected cereal with animation. (Figure 2)

In scene3, after one of nutrition contains is selected (a dropdown list), a histogram of the selected nutrition of 81 cereal is displayed. (Figure 3)

User is encouraged to select other manufactures (scene 1) to export other cereal nutrition contents (scene 2) and its comparisons with other cereals nutrition contents (scene 3).

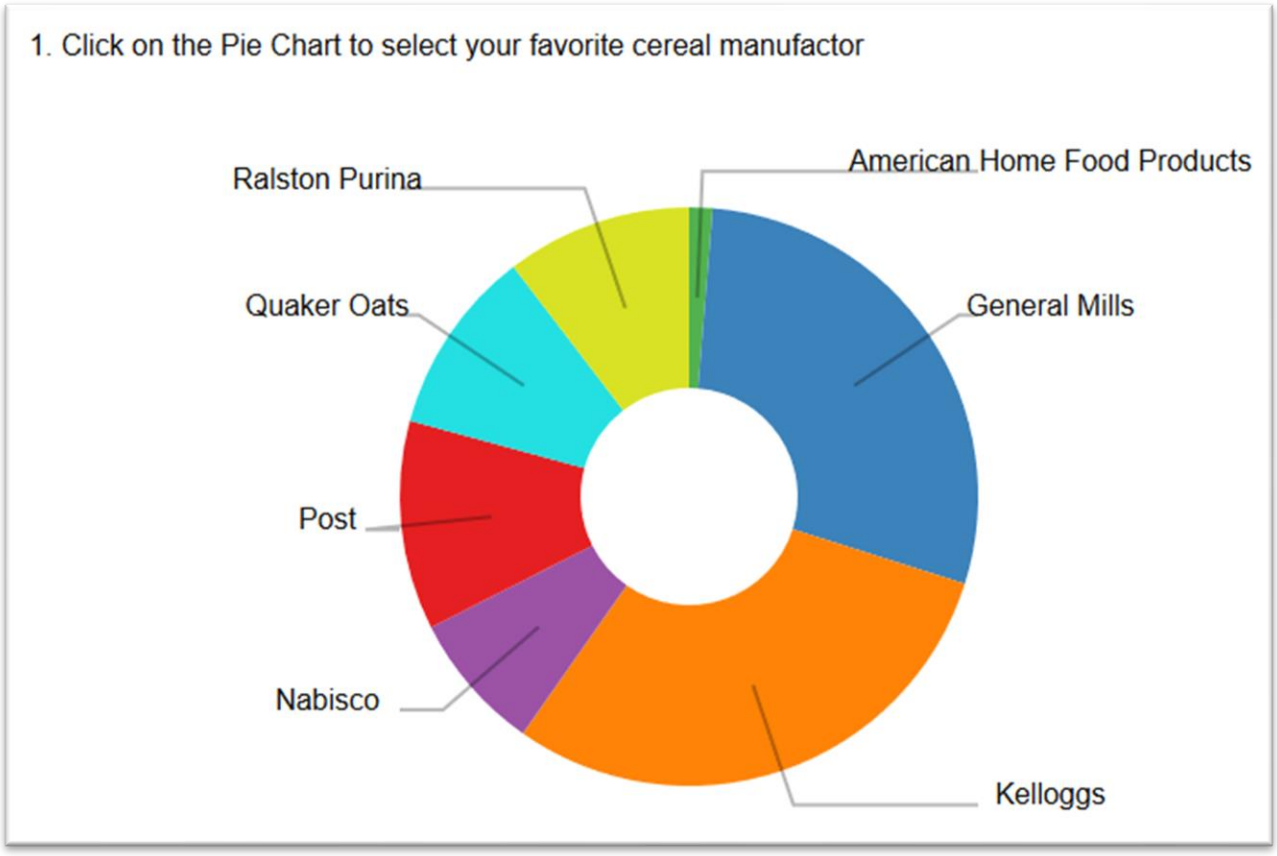

Figure 1: scene 1 and step 1

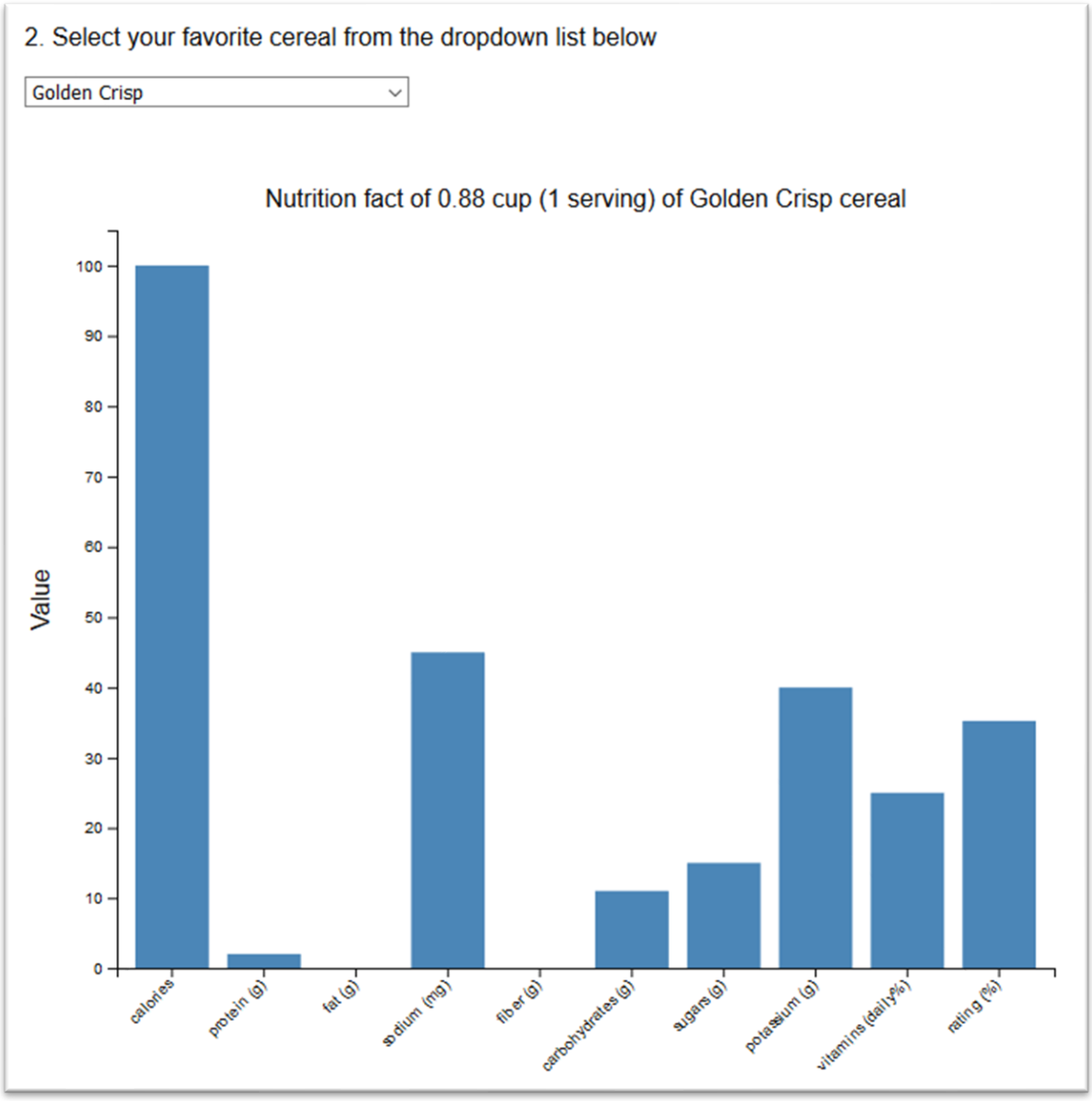

Figure 2: scene 2 and step 2

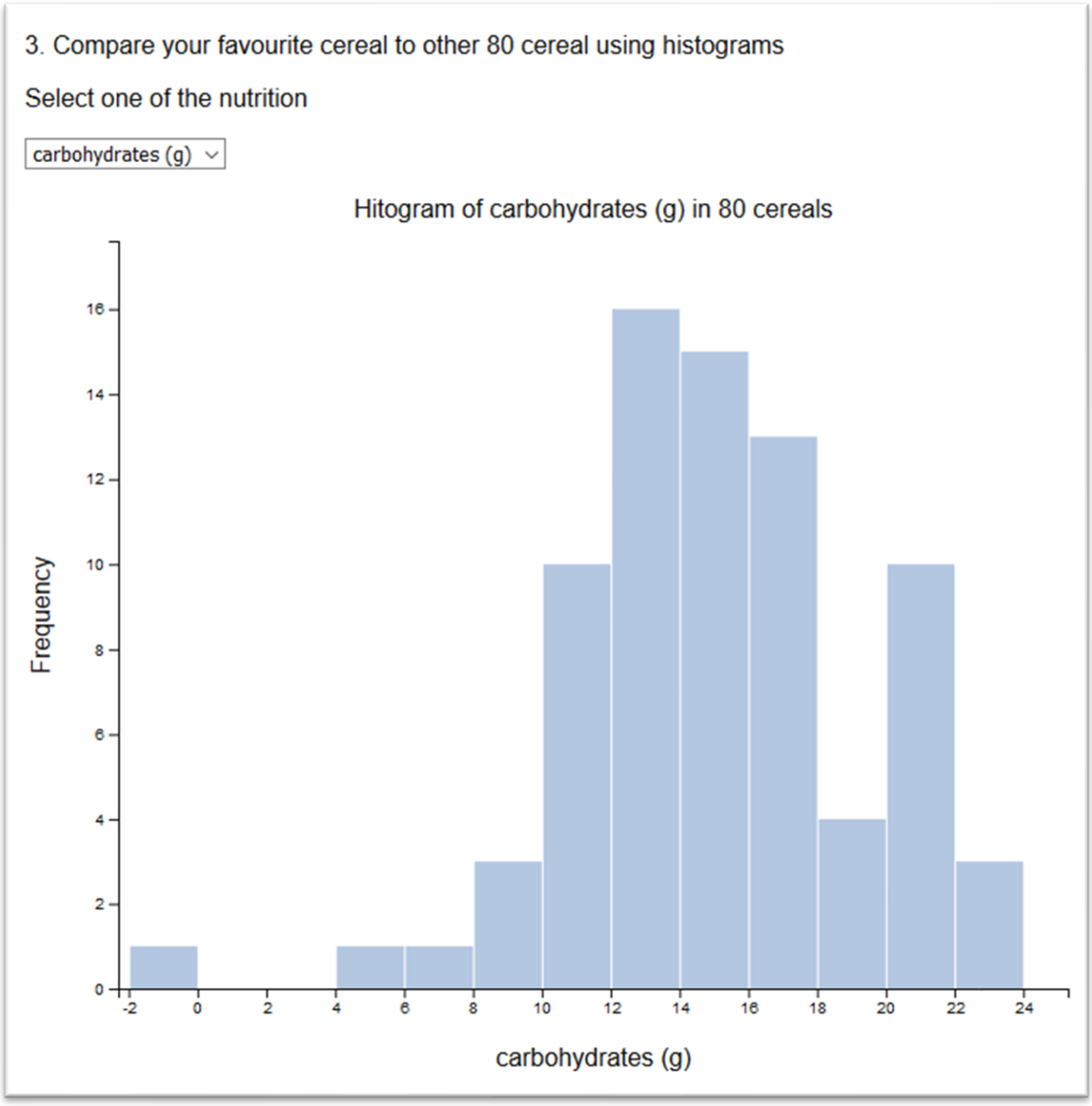

Figure 3: scene 3 and step 3