




## Homework 4 ReadMe — Interactive visualization dashboard (multi-view) option selected

**Dataset:** Nutrition data

**Source:** <http://rosmarus.refsmmat.com/datasets/datasets/nutrition/>

User Tasks to Support		How my Dashboard Supports User Tasks																							
Understand data organization	Understand organization of the major food groups and sub-groups (descriptions).	<p>On the left sidebar, there is a <u><a href="#">hierarchical packed circles chart</a></u> that shows:</p> <p>1) the different major food groups and their sub-groups/descriptions and</p> <p>2) the relative amounts of each food that fall into each category (via a size encoding applied to the circles)</p> <p>When a user clicks on a circle, the visualization zooms in to show the sub-groups.</p> <p>Implementation referenced from <u><a href="#">here</a></u>.</p>																							
	<div><div></div><div></div><div></div></div>																								
View the raw data	See the vast array of foods present in the dataset as text.	<p>A <u><a href="#">scrollable table</a></u> in the main view of the dashboard shows the name of all foods included in the current search/filter parameters along with the major food group that it is a part of.</p> <p>Implementation referenced from <u><a href="#">here</a></u>.</p>																							
	<div><div><div><div>Search for a Food &amp; Understand its I</div><div><input type="text" value="Type a food here..."/> <input type="button" value="Filter by food group: All"/></div></div><div><table><tr><th>Food</th><th>Group</th></tr><tr><td>BUTTER,WITH SALT</td><td>Dairy and Egg</td></tr><tr><td>BUTTER,WHIPPED,WI...</td><td>Dairy and Egg</td></tr><tr><td>BUTTER OIL,ANHYDR...</td><td>Dairy and Egg</td></tr><tr><td>CHEESE,BLUE</td><td>Dairy and Egg</td></tr></table></div></div><div><div><input type="text" value="soup"/> <input type="button" value="Filter by food group: All"/></div><div><table><tr><th>Food</th><th>Group</th></tr><tr><td>BABYFOOD,DINNER,...</td><td>Processed Foods</td></tr><tr><td>SOUP,CRM OF ASPA...</td><td>Soups, Sauces, and G...</td></tr><tr><td>SOUP,BLACK BEAN,C...</td><td>Soups, Sauces, and G...</td></tr><tr><td>SOUP,BEAN W/PORK,...</td><td>Soups, Sauces, and G...</td></tr></table></div></div><div><div><input type="text" value="fruit leather,roll"/> <input type="button" value="Filter by food group: All"/></div><div><table><tr><th>Food</th><th>Group</th></tr><tr><td>FRUIT LEATHER,ROL...</td><td>Processed Foods</td></tr></table></div></div></div>		Food	Group	BUTTER,WITH SALT	Dairy and Egg	BUTTER,WHIPPED,WI...	Dairy and Egg	BUTTER OIL,ANHYDR...	Dairy and Egg	CHEESE,BLUE	Dairy and Egg	Food	Group	BABYFOOD,DINNER,...	Processed Foods	SOUP,CRM OF ASPA...	Soups, Sauces, and G...	SOUP,BLACK BEAN,C...	Soups, Sauces, and G...	SOUP,BEAN W/PORK,...	Soups, Sauces, and G...	Food	Group	FRUIT LEATHER,ROL...
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<b>Examine distributions</b>	<p>Examine distributions of different data attributes (e.g., Protein, Water, Weight, etc.)</p>	<p>Six <u>histograms</u> in the main view of the dashboard show the distributions of the following attributes: Weight, Water, Calories, Protein, Total Fat, and Total Carbohydrates.</p> <p>These can be filtered by major food group using the dropdown menu at the top, allowing a user to examine the distribution of the attributes for a given major food group.</p>
	<p>See the relative amount of different types of fat in subsets of food / for a given food.</p>	<p>A <u>horizontal bar chart</u> shows the relative amounts of saturated, monounsaturated, and polyunsaturated fat across either all the data, a subset of the data, or for a specific food, depending on given search criteria. A tooltip allows users to view the exact chart values.</p>
	<p>See the distribution of vitamins and minerals for different foods.</p>	<p>Two series of <u>dot strip plots</u> show the distribution of vitamin/mineral values for the data colored by major food group, which can be filtered by both the text input search box and by the major group dropdown filter.</p>
	<p>Discover foods based on a specific vitamin/mineral value.</p>	<p>The <u>dot strip plots</u> are hoverable and contain a <u>tooltip</u> showing a food's description and its weight in grams.</p>

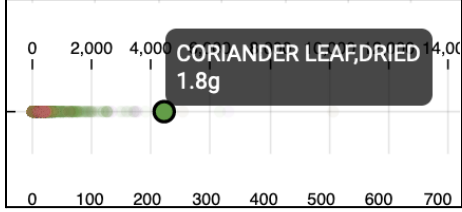
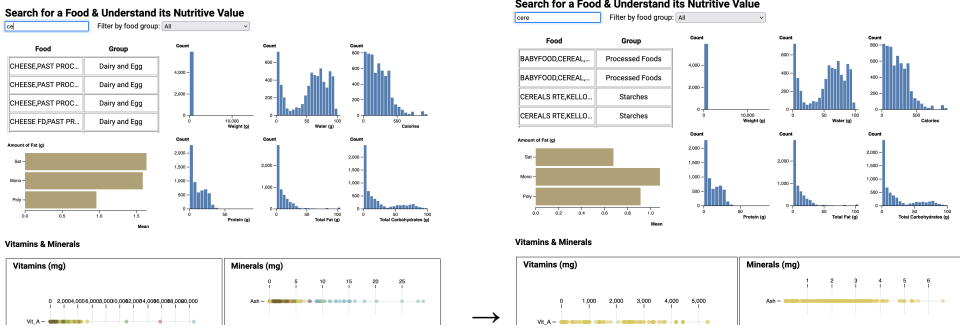
**Amount of Fat (g)**

**Vitamins & Minerals**

**Vitamins (mg)**

**Minerals (mg)**

**Amount of Fat (g)**

<p><b>See a food in context of other foods</b></p>	<p>Understand a given food's vitamin and mineral nutritional value in context with other foods.</p>	<p>The <u>dot strip plots</u> are hoverable and contain a <u>tooltip</u> showing a food's description and its weight in grams.</p> <p>Moreover, the rest of the dots become reduced in opacity while the hovered dot is highlighted.</p>
		
<p><b>Search for a good/foods</b></p>	<p>Search for a specific food.</p>	<p>A <u>text input widget</u> at the top of the main view lets users search for a given food.</p> <p>Users can type or copy/paste the exact food name into the search bar and it will filter the fat types bar chart and the dot plots to display data for a single value.</p>
	<p>See the descriptions of foods that match unfinished search criteria.</p>	<p>The visualizations will update even with incomplete input (for example, if “sou” is typed, then results for “soup” and anything containing the substring “sou” will still appear).</p>
		
<p><b>Filter all information by food group</b></p>	<p>Quickly filter displayed data to only show a major food group of interest.</p>	<p>A <u>dropdown widget</u> at the top of the main view lets users filter the displayed data by a single major food group.</p> <p><b>Important:</b> when a food group is selected, that filter takes precedence.</p>

