NUTRITION ANALYSIS OF CEREALS USING PARALLEL COORDINATES

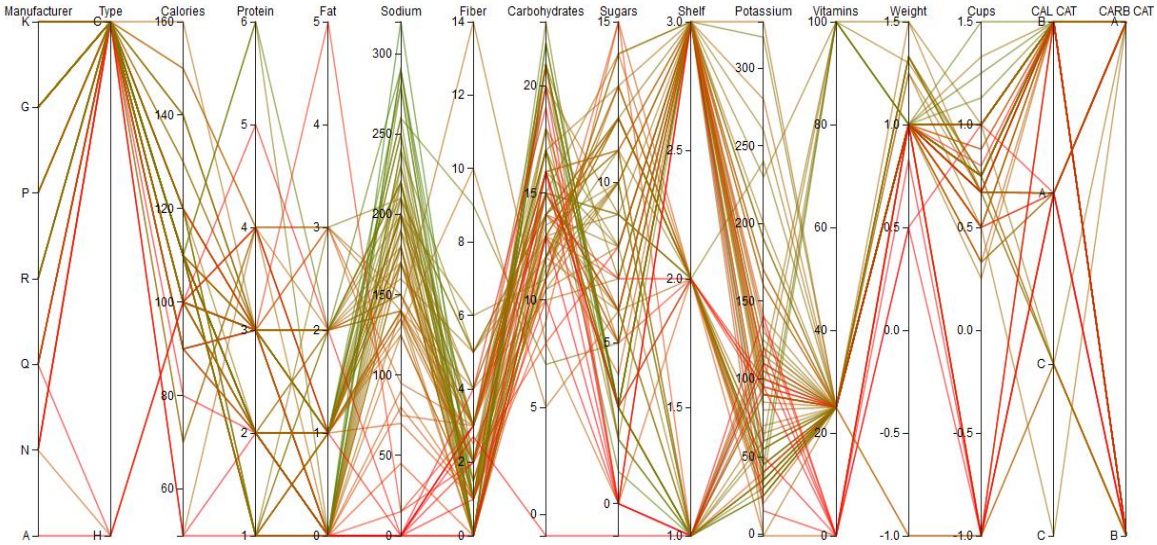
Team Members:

Harsha Bommareddy- 800899385

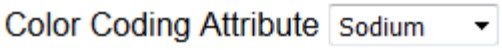
Srikkanth Murthy Sreeram - 800862611

Requirements Met:

1) **Load Data** - Cereal Data was taken from the data zip which was provided earlier in the class. The data was segregated into 5 different data sets apart from the original data set by adding a rank feature for a particular range of values like The Calories were given rank features like High, Medium and Low. While the Carbs were given two rank features like High and Low. Then this Data was loaded in the form of CSV files into the Html code.



2) **Addition of UI to enable user to control the color coding**- We added a linear scale to fixed color also took a generic domain values for which color is scaled and also a range of colors is taken on which it is scaled. Added the dropdown menu to allow the user to control color coding for two attributes Potassium and Sodium. We did this with the help of paracoords.js library.



3) **Scrollable Table displaying Rows and Columns**- by taking the values of the selected polyline we added those values into the table by creating a table using d3.

Name	Manufacturer	Type	Calories	Protien	Fat	Sodium	Fiber	Carbohydrates	Sugar	Shelf	Potassium	Vitamin	Weight
Puffed Wheat	Q	C	50	2	0	0	1	10	0	3	50	0	0.5

4) **Two Additional Indirect Interactions** - We have added 3 Indirect Interactions which include drop down menus for Calories, Carbohydrates which allows us to select between a range to make it useful to the user to know what is the product of his requirements. Added

to this we also have an on click indirect interaction which displays the items with sugars greater than 10.

5) **Direct Manipulation Technique**- The base code which we used as a starting point did not have a feature of Re-orderable axis but it had the reversible scale feature. So we tried implementing the Re-orderable axis. We have used the library paracoords.js which helps us reorder the axes. It was pretty easy to implement using this library.

General Resources:

1. http://bl.ocks.org/mostaphaRoudsari/b4e090bb50146d88aec4
2. http://mostapharoudsari.github.io/Honeybee/pc_source_files/css/d3.parcoords.css

Borrowed Resources:

Using the first resource as our starting code, we were able to achieve what we achieved. We have added a lot of code to the existing code and made a few modifications by removing what was not needed. We took the help of paracoords.js library to get a few operations done like creating axes, color coding and reordering of axes.