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Assignment 4: Explorations in Visualization

The United States has always been a melting pot of different cultures and tastes. However, in recent years, consumers have become as concerned with the uniqueness of their food as the healthiness. As more and more individuals pay attention to the ingredients in the food they purchase, it is important to properly educate consumers on which ingredients are healthy and what types of products contain unhealthy ingredients.

In 2014, the Wall Street Journal published an [article](https://www.wsj.com/articles/1-000-flavors-of-banana-the-new-science-of-food-additives-1414687926?mod=pls_whats_news_us_business_f) on industry efforts to craft new flavors through “flavorings, spices, colorings, thickeners, and preservatives.” This article included a compelling interactive [diagram](http://graphics.wsj.com/food-additives-ingredients/) that displays the “Axis of Additives.” The visual informs readers of some of the most common additives found in foods today. It teaches the user what some of these cryptic ingredients are for and importantly, what product categories they are most likely to find them in. The goal is to help the user be a more informed shopper and avoid ingredients they find unsuitable to their diet.

There are hundreds of thousands of products and ingredients to choose from, so it was key for this visual to be broad enough to be comprehended, but specific enough to have some connection to the user. By including only additives rather than all types of ingredients, the writer focuses on an important trend in processed foods: the increase in artificial ingredients and enhancers. On the right-hand-side of the graph, the writer chose to maintain broad categories instead of calling out specific products. Most importantly, the reader can see the relationships that these ingredients have with each food category and vice versa. By not providing too much information, the reader is kept engaged and potentially incentivized enough to find more information on their own.

In this visualization, the ingredients are presented on the left side of the circle and the supermarket products are presented on the right side of the circle. This visualization provides us one to one mapping as well as many to many mapping. When we hover on the ingredients, it shows how many supermarket products are connected to that ingredient. An information box comes up and tells us about the specific ingredient when we hover on it. The similar type of ingredients is also clubbed together in the same colors, which might be helpful if we want to know which ingredients are similar to each other. The width of the ingredients and supermarket products shows us how much space they occupy in the total distribution. When we go upon to the lines, we can get the percentage constitution of the ingredients in the product and vice versa. We found this visualization to be very appealing and interactive. In some cases, if we are dealing with feature mapping in a product, this will come very handy in explaining the scenarios to the non-technical audience.