Interactive SCU Waste Data

After carefully browsing through the entire dataset, I found a very obvious pattern: the data is hierarchical and it is also constructed with this hierarchical mindset. I was troubled by the Weight column. It is very obvious how much each wastes weight, as the numbers are indicated in pounds. The problem is some items such as “Coffee cup” does not mean 1 cup, they usually mean many items of the same type summed together. This makes inspecting individual items not as helpful as I would like. Therefore, I want to have a comprehensive view of the distribution of waste across type, building, or year. In my interactive visualization, I aim to tell the story of SCU waste weight distribution in the aspects of year, building, and stream, as presented in the dataset.

Since the data is hierarchical, I browsed the D3 gallery and found Sunburst to be highly suitable for the task. This pie-chart-like visualization encodes hierarchical relationships through different rings. Rings towards the center represent a more abstract high level group, while rings towards the circumference represent more nuanced categories. I wanted the Sunburst chart to take up the majority of the screen while still showing everything without the need to scroll up and down too frequently. For color, I simply used D3’s function that samples distinct colors from the rainbow spectrum because it is not trivial to pick designated colors for buildings or years.

There are some straightforward trends immediately noticeable in this visualization. Benson Center has the most waste weight for the majority of the years. Recycling takes up the majority of waste weight in a lot of buildings.

To use this visualization, first check the years that you want to see, the webpage dynamically populates the filtered data when you click on the checkboxes. Then you can hover your mouse over any piece within the big circle and you will be able to see the weight as well as the percentage this piece takes in its own ring. You can also click on any of the pieces to zoom in to further see the nuanced types of waste. The details go all the way down to each waste item like “Cardboard” or “Plastic Film”. To zoom out, simply click on the white space around “Go Back”. I do realize there is a minor glitch where the animation doesn’t work the first time you click something, but after that the first click, animations work just fine.