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Mini Project 3

Visualization 1

In visualization 1, I chose to use an adjacency matrix to represent the donations made between countries. The color of each cell represents the amount donated from a country in a row to a country in a column, and the value is normalized between [0, 1], relative to each donor. By normalizing amounts, it is easier to see the distribution for each country, as well as which countries receive a large proportion of a donor's money. An interesting pattern that appears is that many countries gave a large proportion of their donations to India, while it donated nothing back. The matrix is sorted based on the total amount, which creates a separation of countries into major donors and major recipients. A row with many entries shows a country that donates often and a column with many entries shows a country that receives often. One downside to normalizing the amounts is that it loses the true value, but since there are some countries that donated a very large amount to another country, they skewed the scale. If left unaltered, most countries' cells would be faded out and hard to read. Overall, I believe that this approach answers all of the questions in the prompt well.

Visualization 3

In visualization 3, I chose to use a series of adjacency matrices (one for each purpose of disbursement) for answering the questions in the prompt. The color of each cell represents the amount donated from a country in a row to a country in a column, and the value is normalized between [0, 1], relative to each donor/recipient pair. To rephrase, each value in a cell is proportional to the total amount a country donated to another country across all 5 purposes. Darker cells would indicate that a country sends mostly for one purpose to another country, while lighter cells would indicate the opposite. The matrices were sorted by most frequent donor (number of countries a donor sends to). Ordering it this way shows an interesting pattern. The more frequent donors tended to donate more for the same purposes.

I do not believe this is the best way of answering the questions for this prompt. It is hard to compare across the different matrices, especially since it was difficult fitting them side-by-side without them being too small (I submitted a sequence of screenshots, zoomed in, so you could read the charts). I felt I couldn't remove enough countries to make it easier to see, without also sacrificing too much information. My original sketch for this question used a single adjacency matrix, where each cell contained a pie chart to show the proportion of each purpose that was sent to a specific country. I believe this does a better job of answering all of the questions since all of the information for a single donor/recipient is in a single cell. Unfortunately, I was unable to figure out a way of doing this in D3, so I settled for the submitted design.