Erdos Number Visualization

The data I used is a subgraph of the collaboration graph induced by co-authors of the mathematician Paul Erdos. In other words, its vertices are people with Erdos Number 1, and two vertices are joined by an edge if they have published a joint paper (with or without other collaborators). Paul Erdos himself and people with Erdos number 2 and higher are not included.

The Erdos number has been a part of the folklore of mathematicians throughout the world for many years. To find out more about the Erdos number, see the following link:

<https://www.oakland.edu/enp/>

The data that I used to form this visualization can be found at the following link:

<https://files.oakland.edu/users/grossman/enp/erdos1graph.html>

I choose this data because was a working mathematician and I have always heard about the Erdos number and wanted to visualize this relationships between mathematicians. Note that I have authored papers, but not with other mathematicians. So my Erdos number is said to be infinity.

Note that in the visualization, when you hover over a node, you will find the mathematician’s name and the number of papers they have coauthored with mathematicians with Erdos number 2. The more papers coauthored with Erdos number 2’s, the larger the node. Note also that most of the authors with a lot of coauthors with Erdos number 2, seem to be clustered in the interior of the force graph. Nodes in the interior of the graph have more links to other nodes in the graph (others with Erdos number 1). So these mathematicians would seem to drive collaboration within the discipline as they authored papers with a wide range of people.

The complete visualization can be found at this link:

<https://github.com/peterstephens4/erdos_number>