Geospatial Analysis and Map

#6. The cleaned data set is aggregated by zip code (unique to institutions) and sum the total funding amount, number of researchers and number of projects. The resulting data set contains 29 rows of unique institutions. Five existing attributes were retained to create the data set for geospatial analysis. An additional of seven attributes were created in geocoding process to extract longitude and latitude markers.

#7. The geospatial analysis was run using Congressional District Geocoder. There were five zip codes which could not been given a congressional district. The longitude and latitude markers were located using GPS Visualizer online tool for the five zip codes. The data was then visualized using proportional symbol map with the size of the edges represents the total amount of funding and the color of the circles represents the number of researchers in sample 1, while in sample 2, the size of the edges represents the number of projects and the color of the circles represent the number of researchers.

#8. The proportional symbol maps clearly show the top five players in the occupational therapy research – The University of Pittsburgh, Thomas Jefferson University, University of Southern California, University of Chapel Hill, and Colorado State University. These institutions have the most researchers who have conducted the most research projects from 1982 until recent year (based on the earliest funded project). The two maps showing different attributes did not differ as much. The map, however, will not be a good visualization to show the topics researched by these institutions.

Further work

The proportional symbol map function in Sci2 (on my computer) did not show the option to assign the edge color, which will be useful to make the map more readable, visually. I will explore this issue and hoping that the final map will have edge color.



