Data Collection and Querying

The data used to create this nodular graph was found in National Oceanic and Atmospheric Administration's Severe Weather Data Inventory (SWDI). This database contains records from 1997 to mid-September 2024 as of writing. Using common URL query syntax, I queried five URLs to gather the NEXRAD Level-3 Tornado Vortex Signatures from the 2024 tornado season (March through July).

Consulted Resources for Data Querying

Severe Weather Data Inventory (SWDI)

NEXRAD Level III Data Products

Constructing the Network	
Resource Consulted	What I Did With It
https://medium.com/nerd-for-tech/comp arative-analysis-of-degree-centrality-and- betweenness-centrality-in-large-graphs-e 63576e052b8 AND https://medium.com/@thoashook/introdu ction-to-networkx-node-centrality-9c553 ab3bb30	Determining which centrality I should use for my graph
https://stackoverflow.com/questions/297 97990/networkx-spring-layout-with-differ ent-edge-values AND https://networkx.org/documentation/stab le/tutorial.html	Wokring with NetworkX and different visualizations
https://stackoverflow.com/questions/576 46080/python-networkx-color-nodes-acc ording-to-different-centrality-measures	Coloring nodes according to different centrality measures (grouping nodes together)
In-class exercises	Modeled code after IMDB database in-class example

Article Resources

Coleman, Timothy A., Richard L. Thompson, and Gregory S. Forbes. "A Comprehensive Analysis of the Spatial and Seasonal Shifts in Tornado Activity in the United States". Journal of Applied Meteorology and Climatology 63.6 (2024): 717-730. https://doi.org/10.1175/JAMC-D-23-0143.1 Web.

https://www.ncei.noaa.gov/products/radar/next-generation-weather-radar