MECH 6317.001 Project Proposal – Tanner Kogel

The following describes the network which I hope to create and analyze for the purposes of use in the Mech 6317 Dynamics of Complex Networks and Systems project.

Network Description

The network that I wish to build for this project is actually two networks. The first being the network of Greyhound buses, where every node is a city, and an edge exists between two nodes if there exists a direct Greyhound bus route between those two cities. The second network is defined in the same way as the first, except instead of an edge's existence being determined by a direct Greyhound bus route, it will be determined by a direct Amtrak route.

Data Collection

The nodes of the graphs will be collected from the Wikipedia page for the largest cities in the United States. The Greyhound route data will be found from the Greyhound Route Map, and the Amtrak route data will be found from the Amtrak Route Map.

Links in case the above don't work

Wikipedia: https://en.wikipedia.org/wiki/List_of_United_States_cities_by_population

Greyhound Route Map: https://www.greyhound.com/bus-routes

Amtrak Route Map: https://www.amtrak.com/plan-your-trip.html