

W209 Assignment 5

Network Graph Visualization

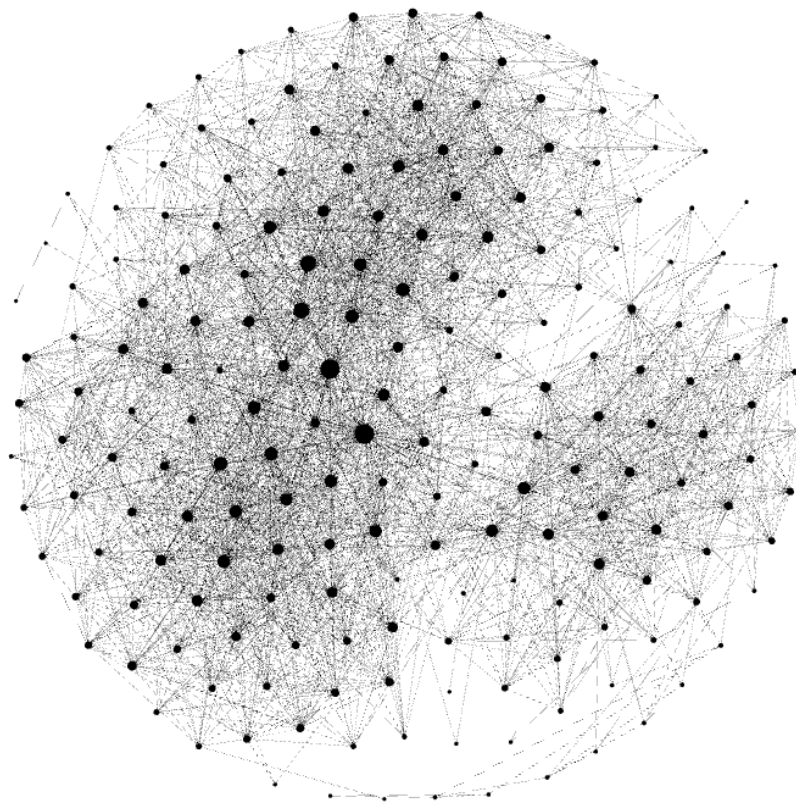
Ron Cordell W209-3

Jazz Musician Network

I selected the Jazz Musician network because it is more manageable than some of the other networks I explored. For example, the Comic Hero network is huge and difficult to work with and looks like a huge fuzzy dust ball. The Jazz Musician network is more easily visualized and understandable. I had hoped that actual names would be associated with the nodes, but since that data isn't part of the set I've left the nodes unlabeled.

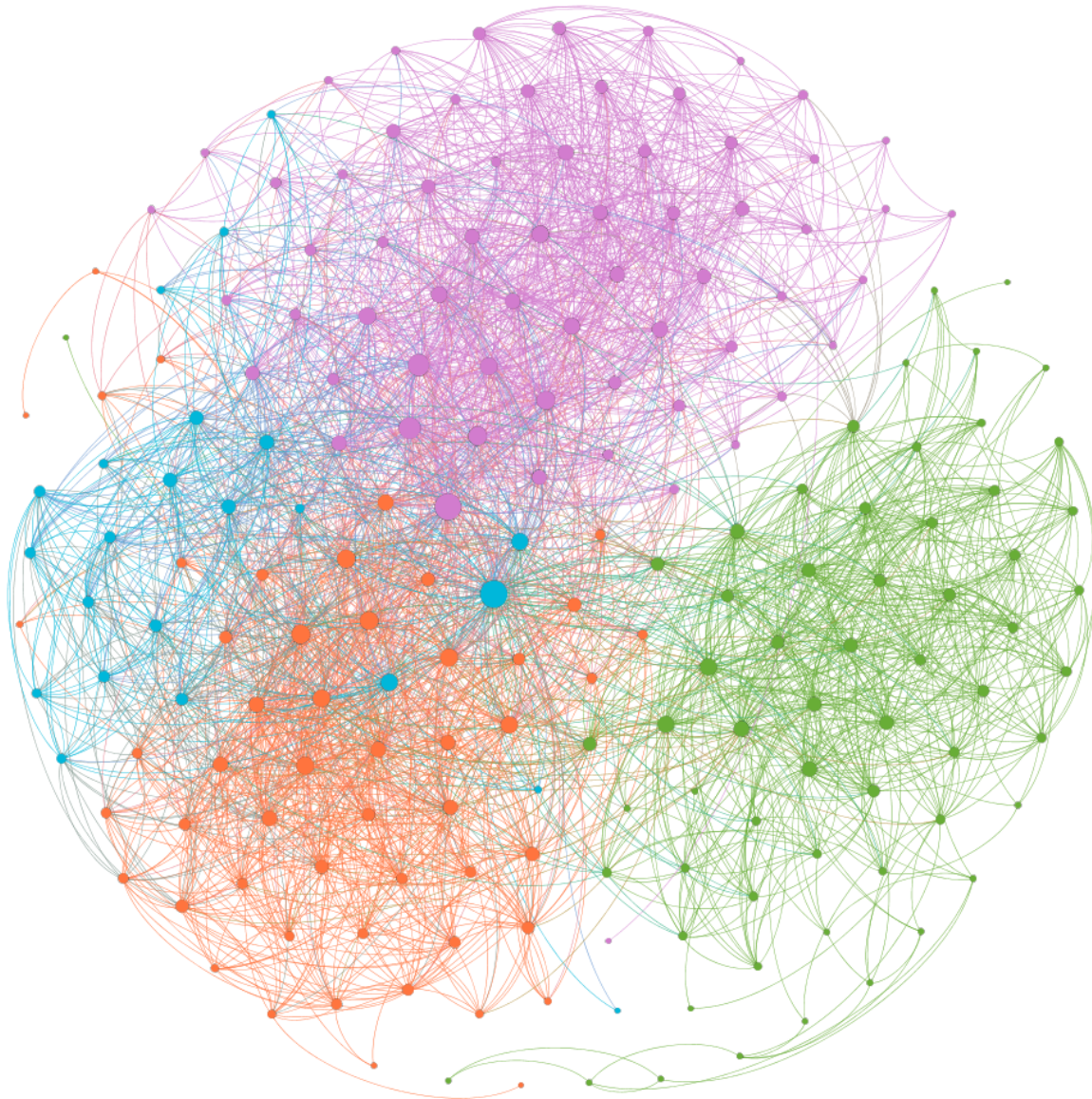
Initial Graph Setup

The initial graph for the Jazz Musician's network is generated from the Fuchterman-Reingold plugin with an area of 100000. The nodes are sized by the degree attribute.



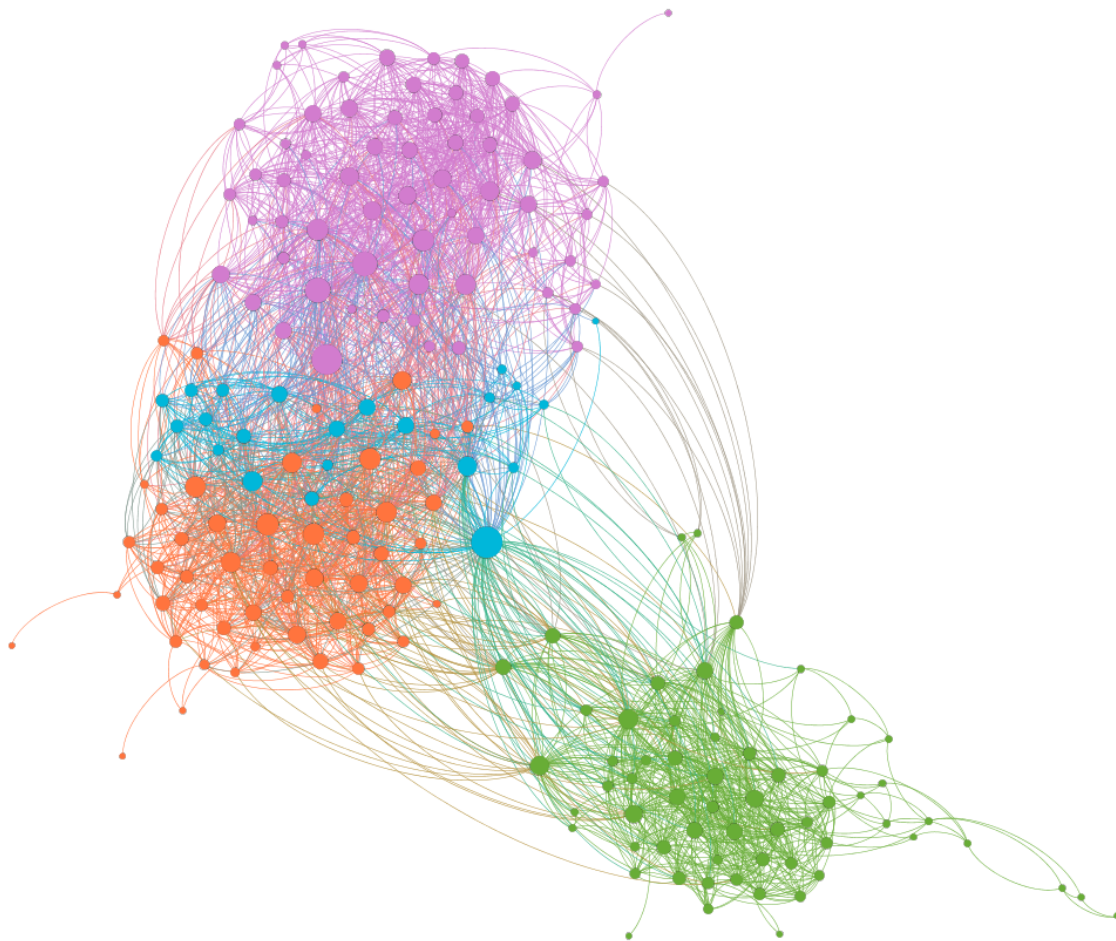
Jazz Musician Communities

Using modularity as a class identifier we can see 4 distinct communities.



Exploring Communities

We can see from the second graph that there are some individuals that appear as conduits between communities. Using the ForceAtlas2 plugin we can spread the groups apart a little more to see these gatekeepers. Notice the large blue node in the center of the graph. There are some nodes that connect 2 communities, but the large blue node connects all of them.



Centrality

Changing the node size to correspond to eigenvector centrality we can see one estimation of individual node importance in the graph.

