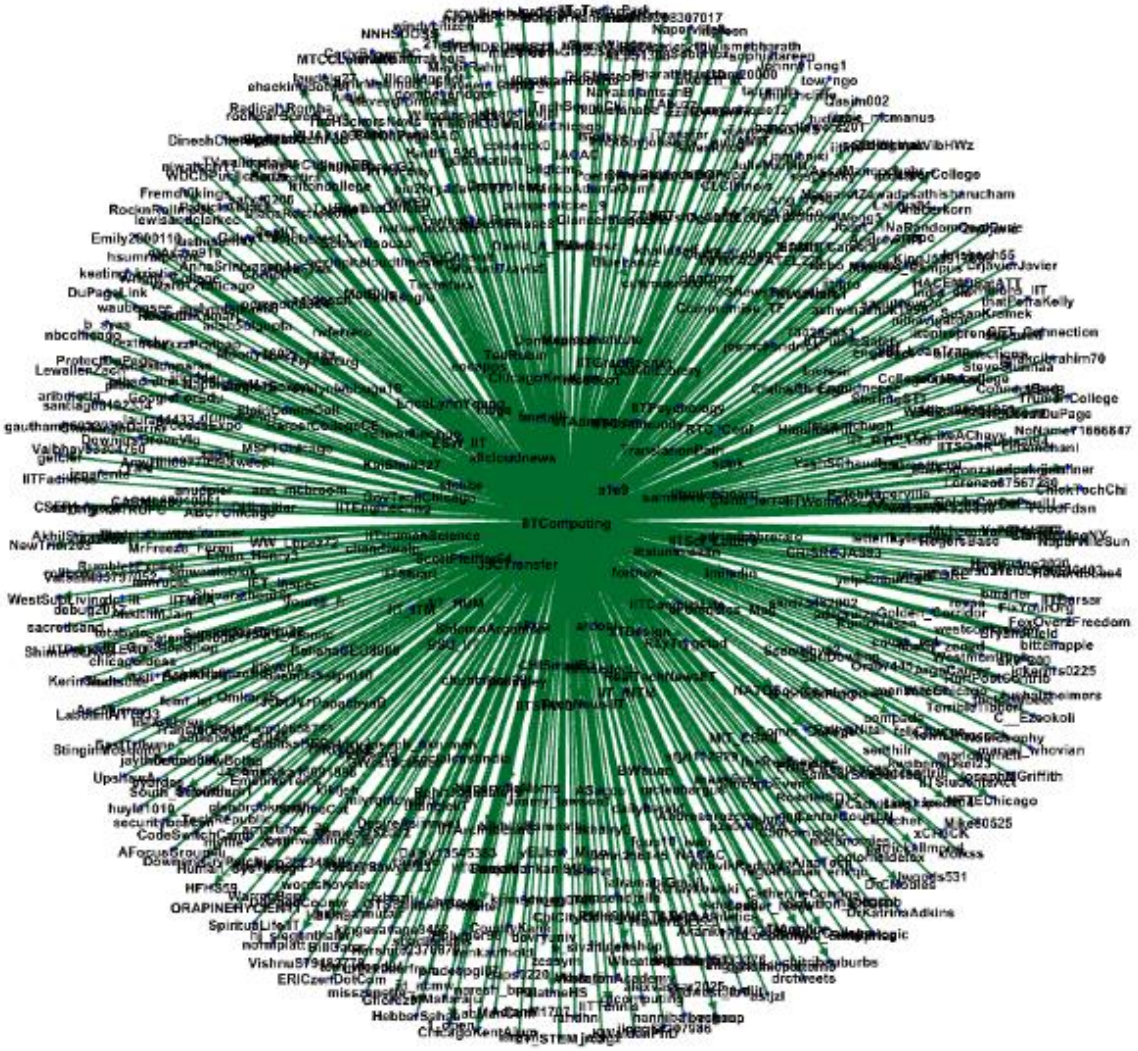
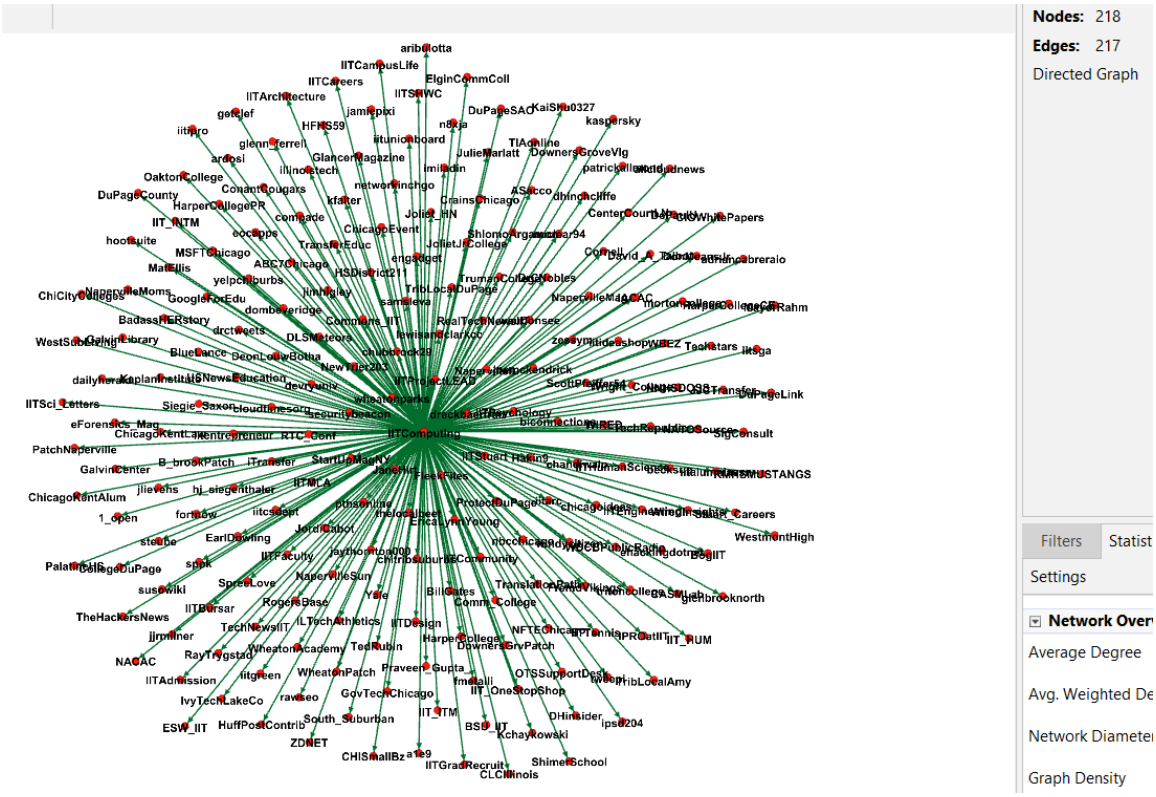
Gephi

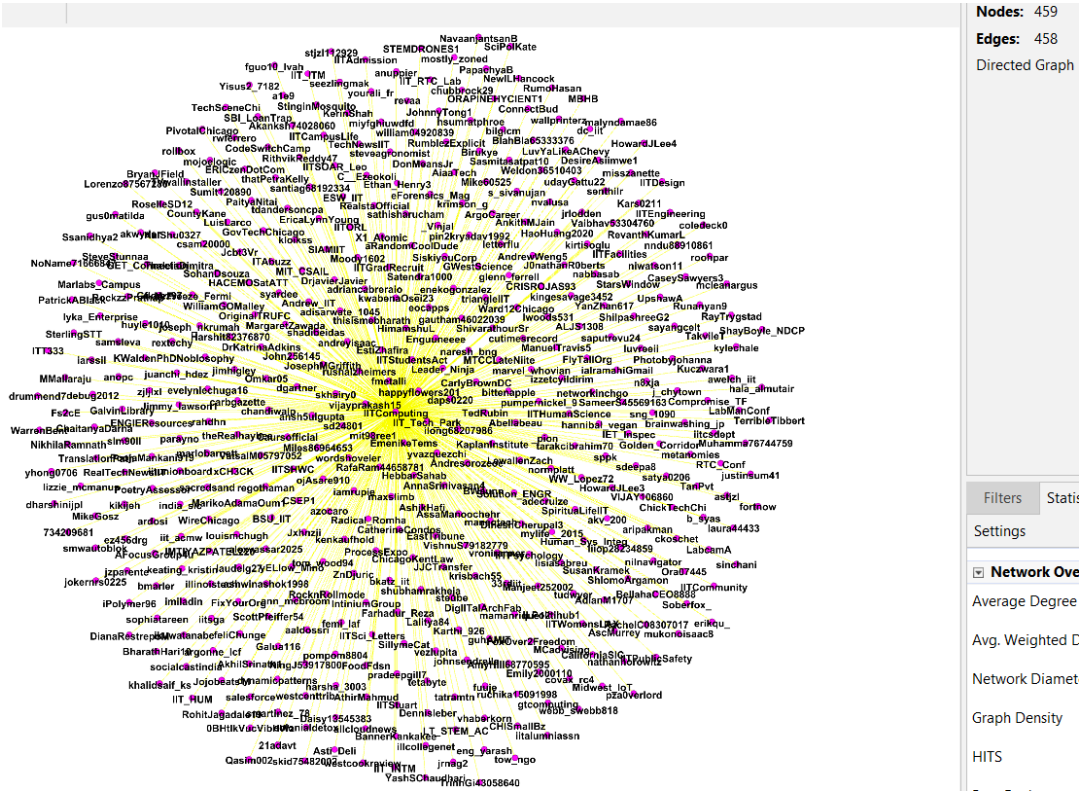
Gephi is an open-source network analysis and visualization software package written in Java on the NetBeans platform.



Network of '@IITComputing' using 'Noverlap' and 'Yifan Hu' layouts in Gephi



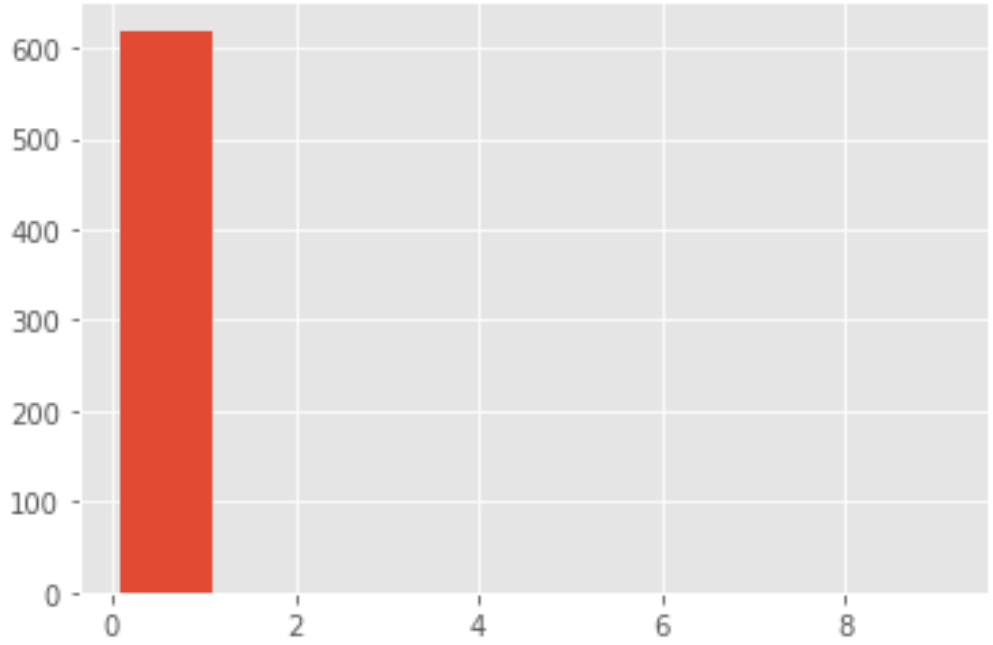
Following Network of '@IITComputing' using Gephi



Followers Network of '@IITComputing' using Gephi

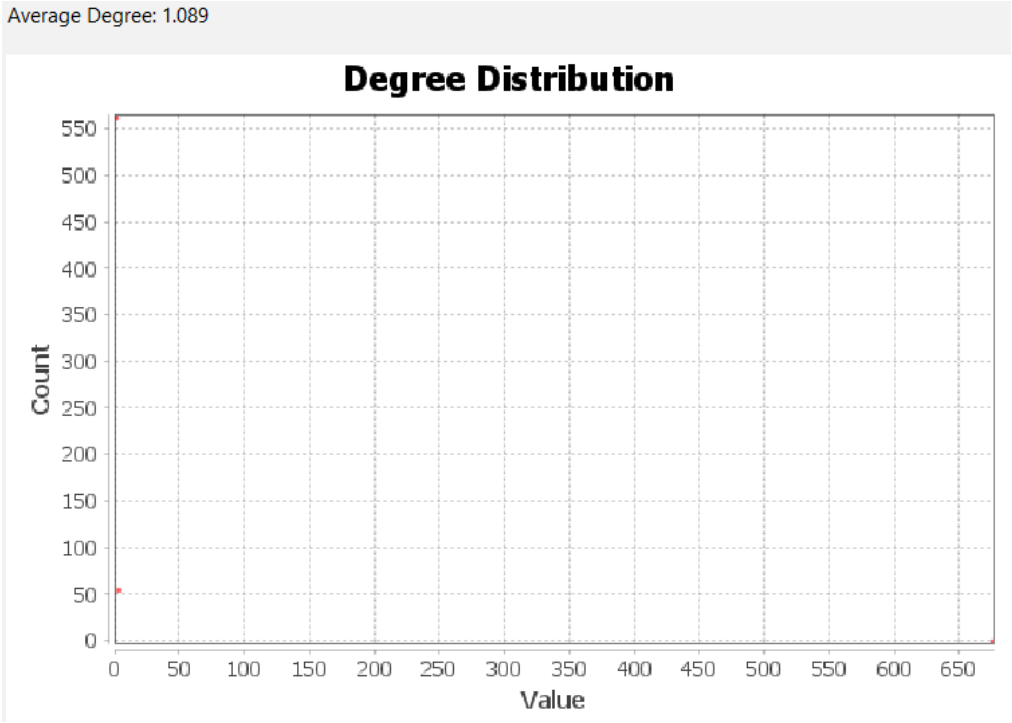
Network Measures:

1) Degree Distribution: The degree of a node is the number of connections that it has to other nodes and degree distribution is probability distribution of the degrees over the entire network.

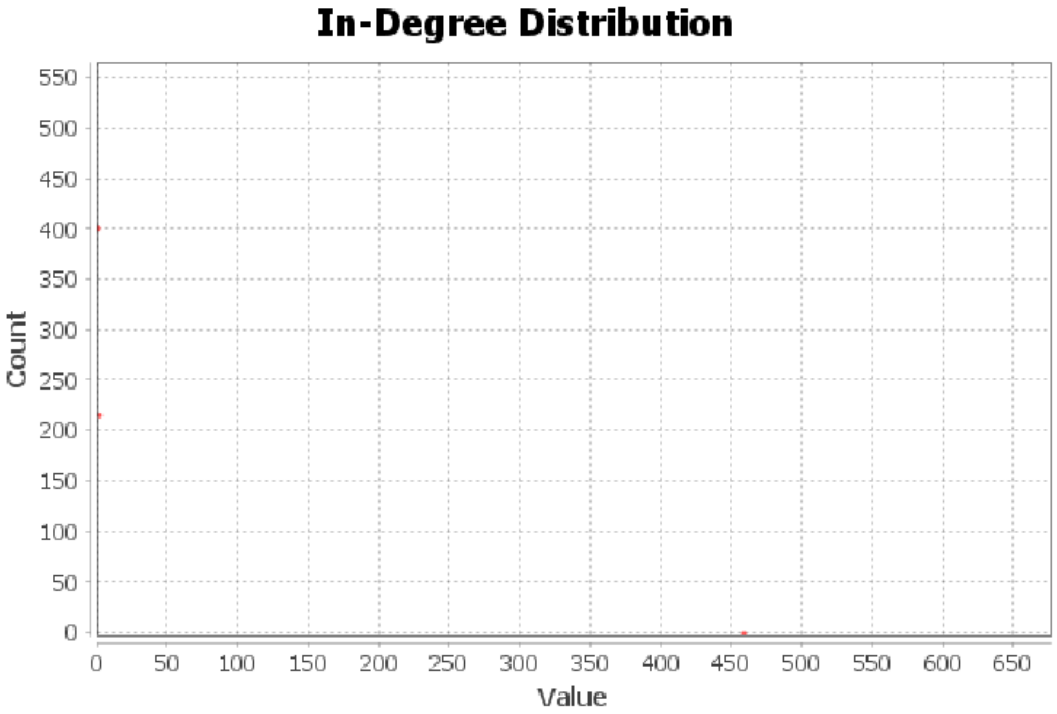


Histogram Plot of Degree Distribution

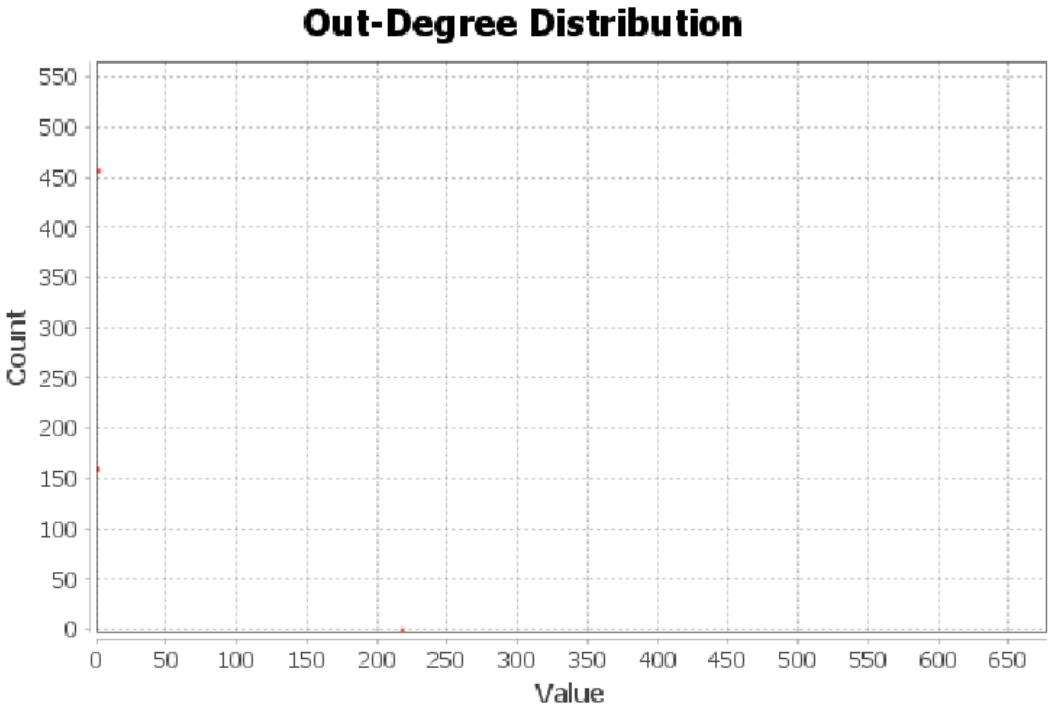
Average Degree: **1.089**



Degree Distribution Plot using Gephi

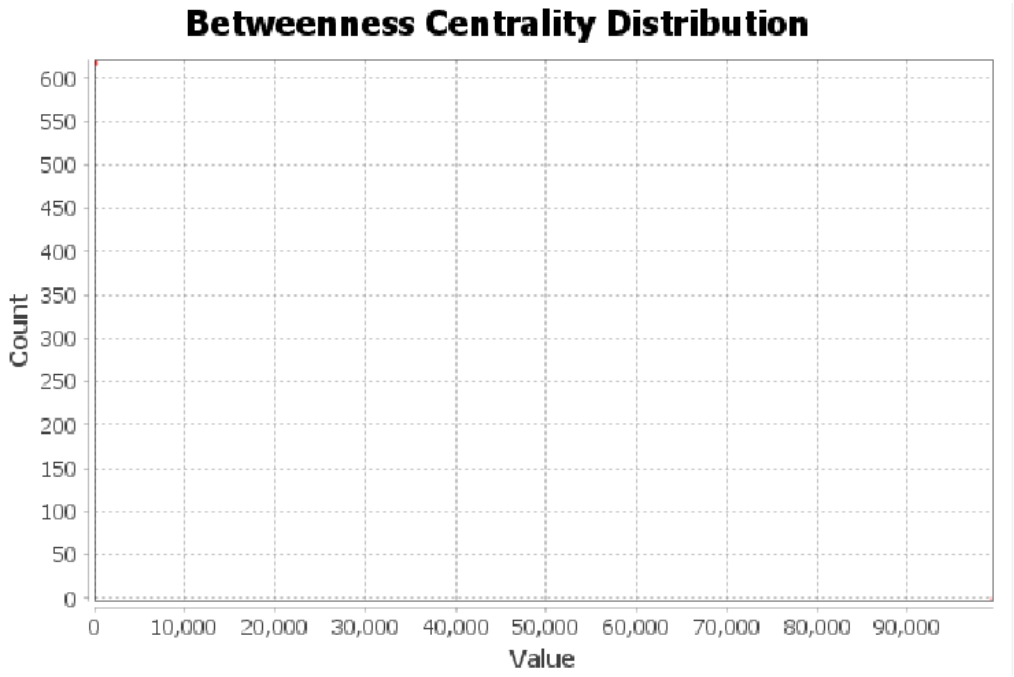


In-Degree Distribution Plot using Gephi



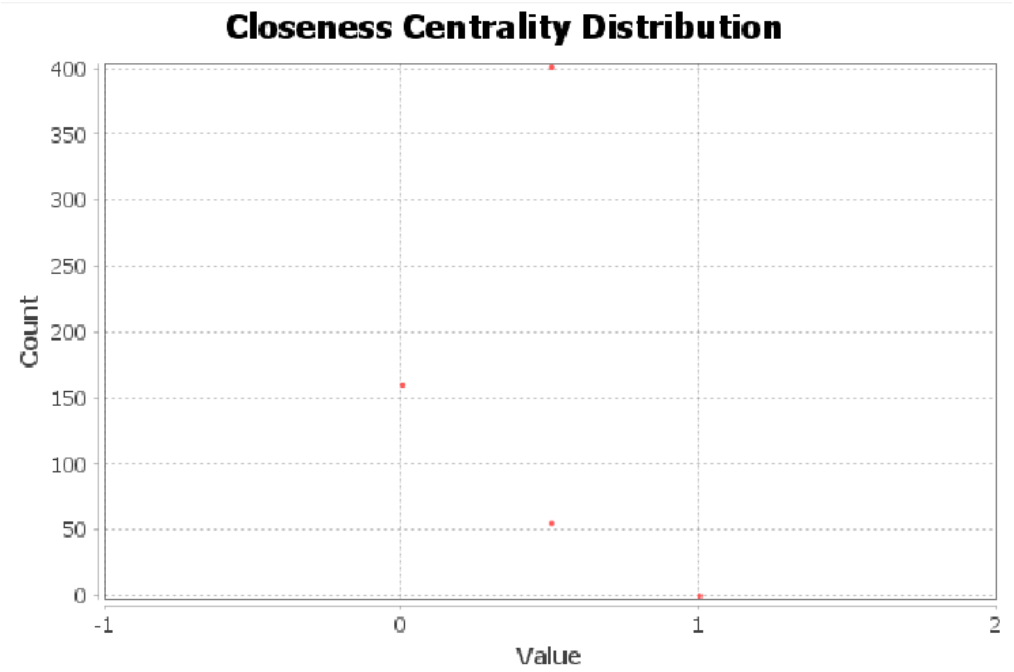
Out-Degree Distribution Plot using Gephi

2) Betweenness Centrality: Betweenness centrality is a way of detecting the amount of influence a node has over the flow of information in a graph.

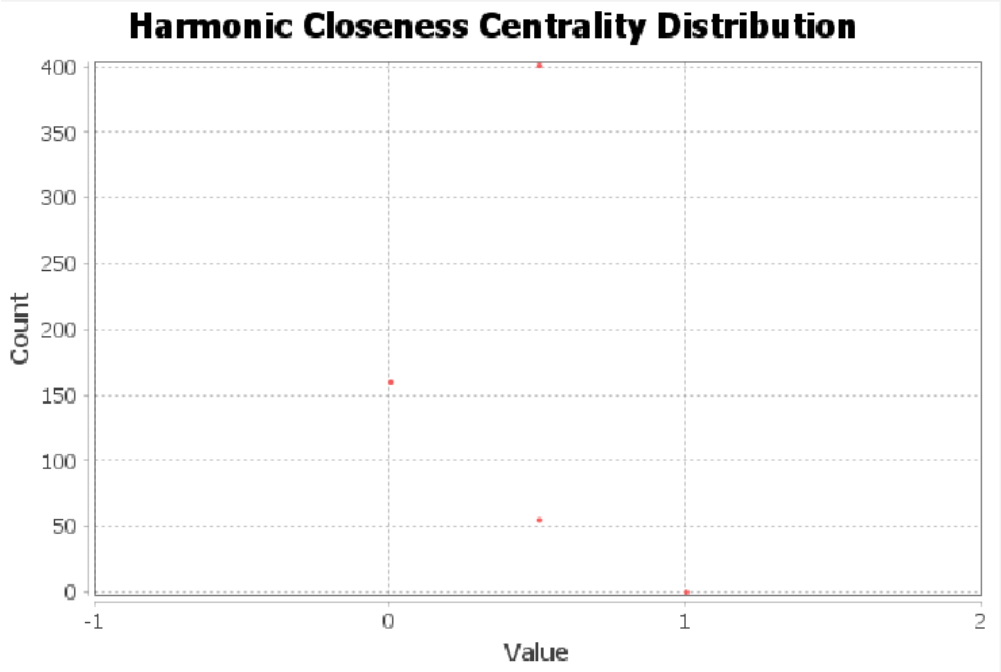


Betweenness Centrality Distribution Plot using Gephi

3) Closeness Centrality: Closeness centrality is a measure of the average shortest distance from each node to each other node. Closeness centrality is a way of detecting nodes that are able to spread information very efficiently through a graph.



Closeness Centrality Distribution Plot using Gephi



Harmonic Closeness Centrality Distribution Plot using Gephi

4) Graph Density: Graph density represents the ratio between the edges present in a graph and the maximum number of edges that the graph can contain.

Graph Density Report

Parameters:

Network Interpretation: directed

Results:

Density: 0.002

5) Diameter: Diameter of a graph is the length of the shortest path between the most distanced nodes.

Graph Distance Report

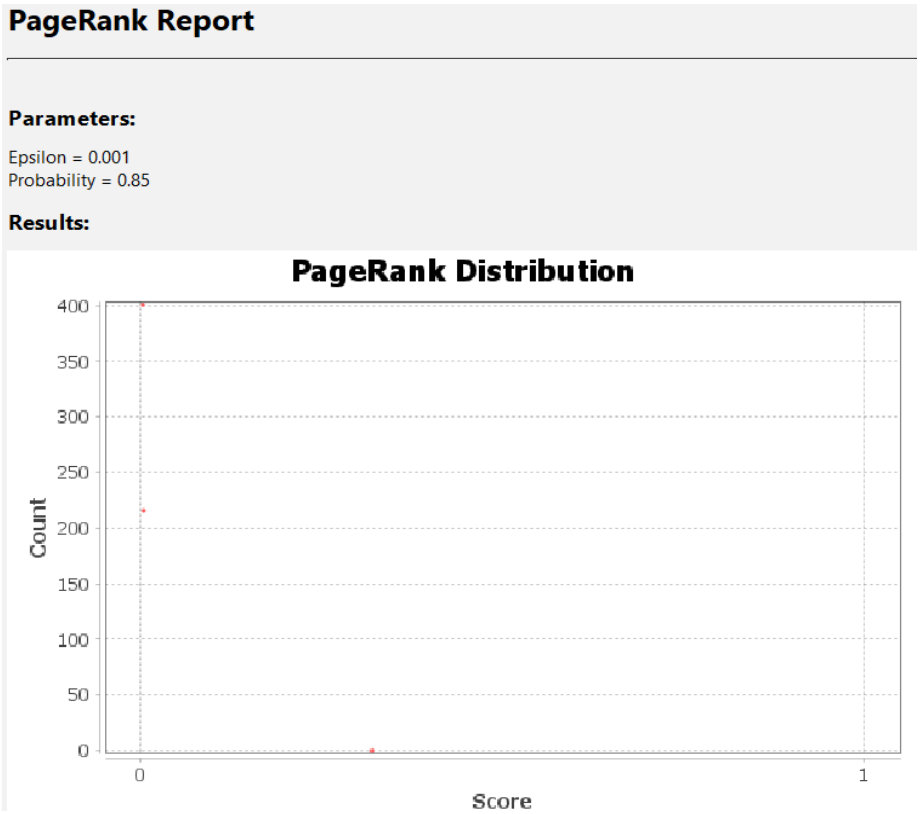
Parameters:

Network Interpretation: directed

Results:

Diameter: 2
Radius: 0
Average Path length: 1.9932503374831259

6) PageRank: Pagerank is the ranking of a node based on how important they are in a network.



PageRank Distribution Plot using Gephi

References:

[1] Gephi: https://gephi.org/

[2] Gephi Tutorial: https://gephi.org/users/quick-start/