

Network Science Project

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The Graph

1000 random followers of
Pavel Durov's VK page.

Nodes: people

Edges: friendship



Description of the graph

Number of nodes: 166

Number of edges: 3541

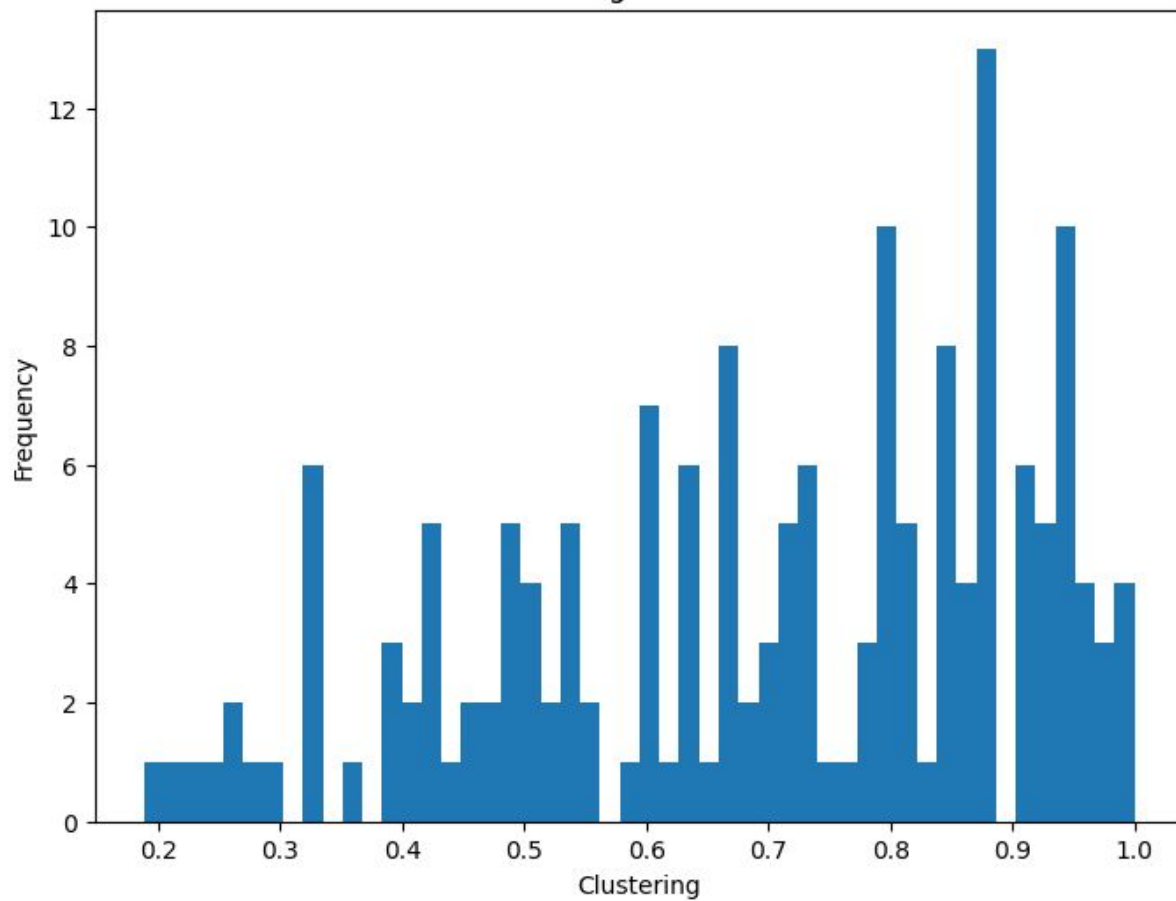
Radius: 3

Diameter: 4

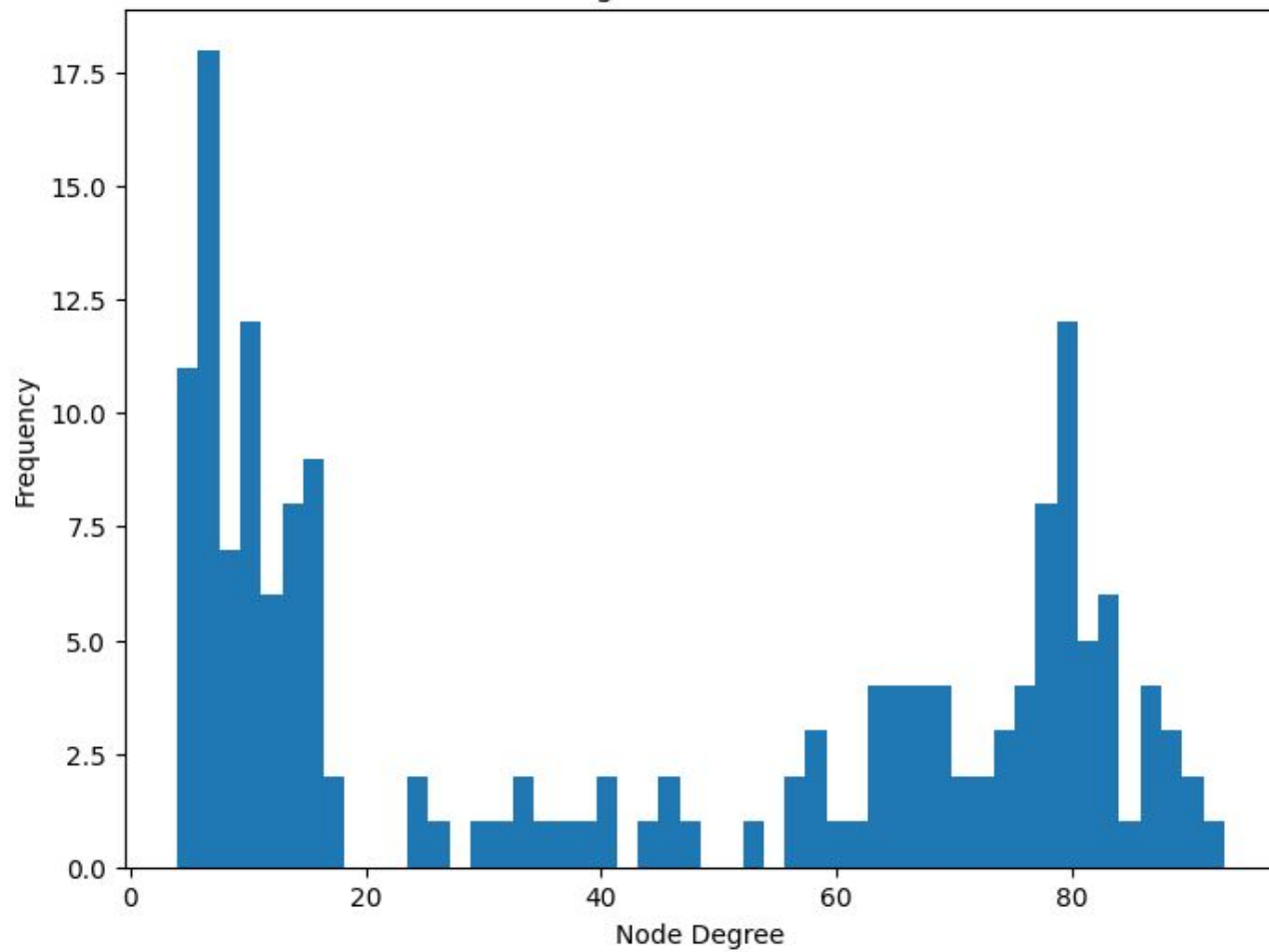
Average shortest path length: 2.05

Average clustering coefficient: 0.69

Clustering distribution



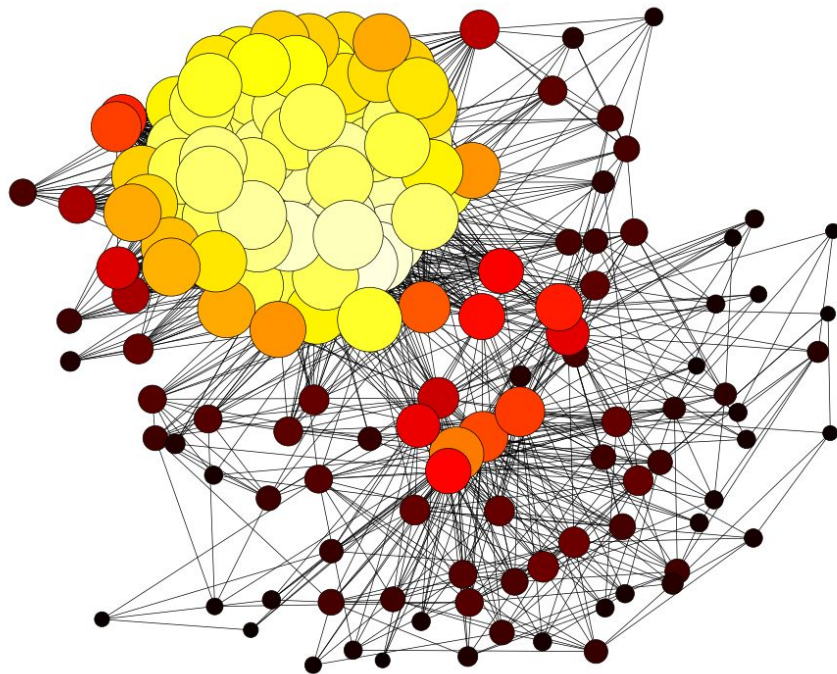
Degree distribution



Top 10 degree centrality

Degree centrality

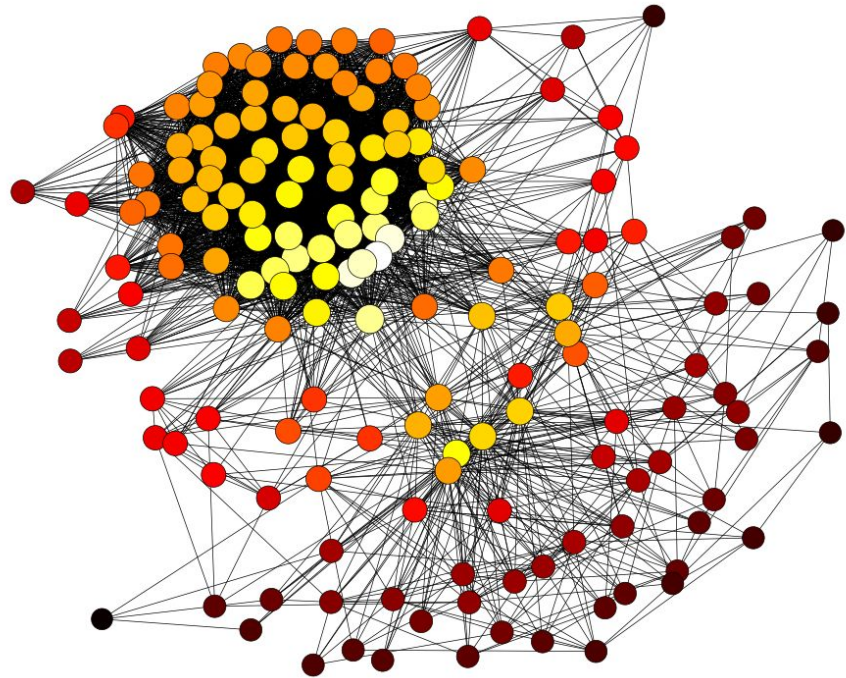
	name	centrality
7	Kirill_Sokolov	0.563636
9	Adam_Kirk	0.551515
44	Vladimir_Erapolov	0.545455
35	Mazen_Mohamed	0.539394
27	Emma_Ragimova	0.533333
81	Ruslan_Semenets	0.533333
1	Grigory_Ruzhinsky	0.527273
94	Julia_Bay	0.527273
61	Yan_Skameykin	0.527273
23	Svetlana_Butyaeva	0.521212



Top 10 closeness centrality

Closeness centrality

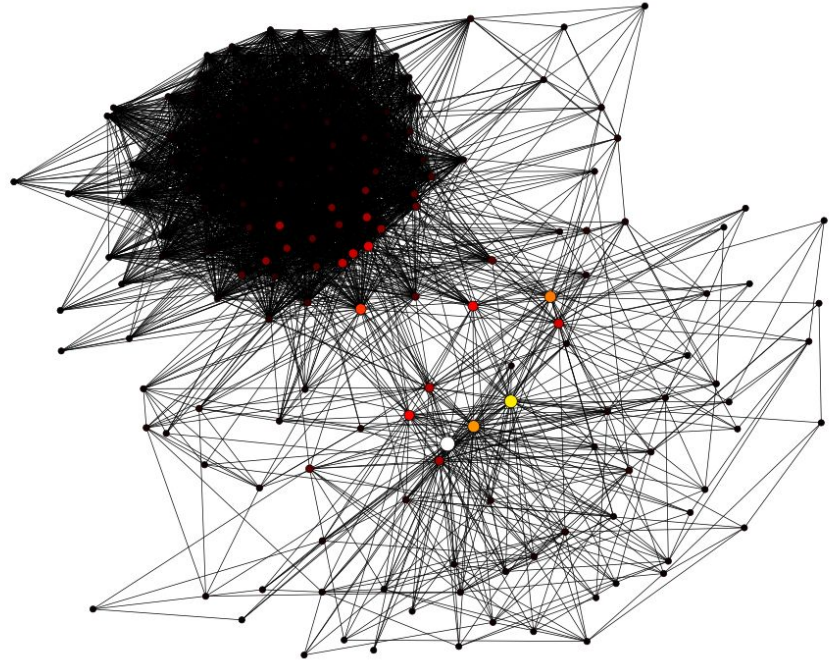
	name	centrality
35	Mazen_Mohamed	0.676230
1	Grigory_Ruzhinsky	0.665323
27	Emma_Ragimova	0.665323
44	Vladimir_Erapolov	0.654762
72	Vitaly_Privalenko	0.639535
40	Ekaterina_Sokolova	0.634615
94	Julia_Bay	0.634615
7	Kirill_Sokolov	0.632184
19	Eleonora_Nosikova	0.629771
81	Ruslan_Semenets	0.622642



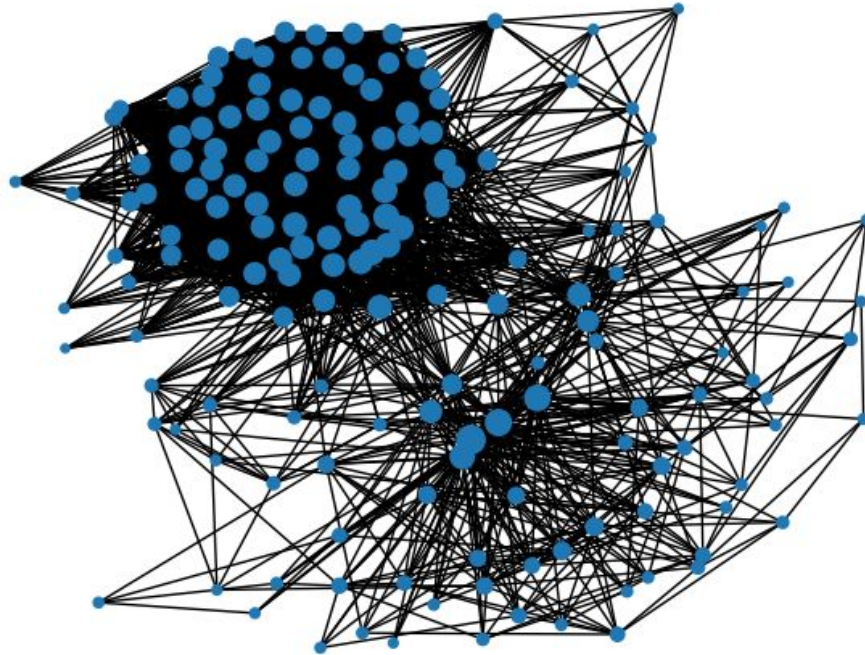
Top 10 betweenness centrality

Betweenness centrality

	name	centrality
108	Timofey_Agapov	0.104207
12	Sasha_Bocharov	0.074875
10	Andrey_Tyagunov	0.060990
15	Ksenia_Efimova	0.056798
72	Vitaly_Privalenko	0.045838
113	Matvey_Romanov	0.037877
6	Dmitry_Shulepov	0.036551
35	Mazen_Mohamed	0.033471
4	Nikita_Grigoryev	0.031901
44	Vladimir_Erapolov	0.030443

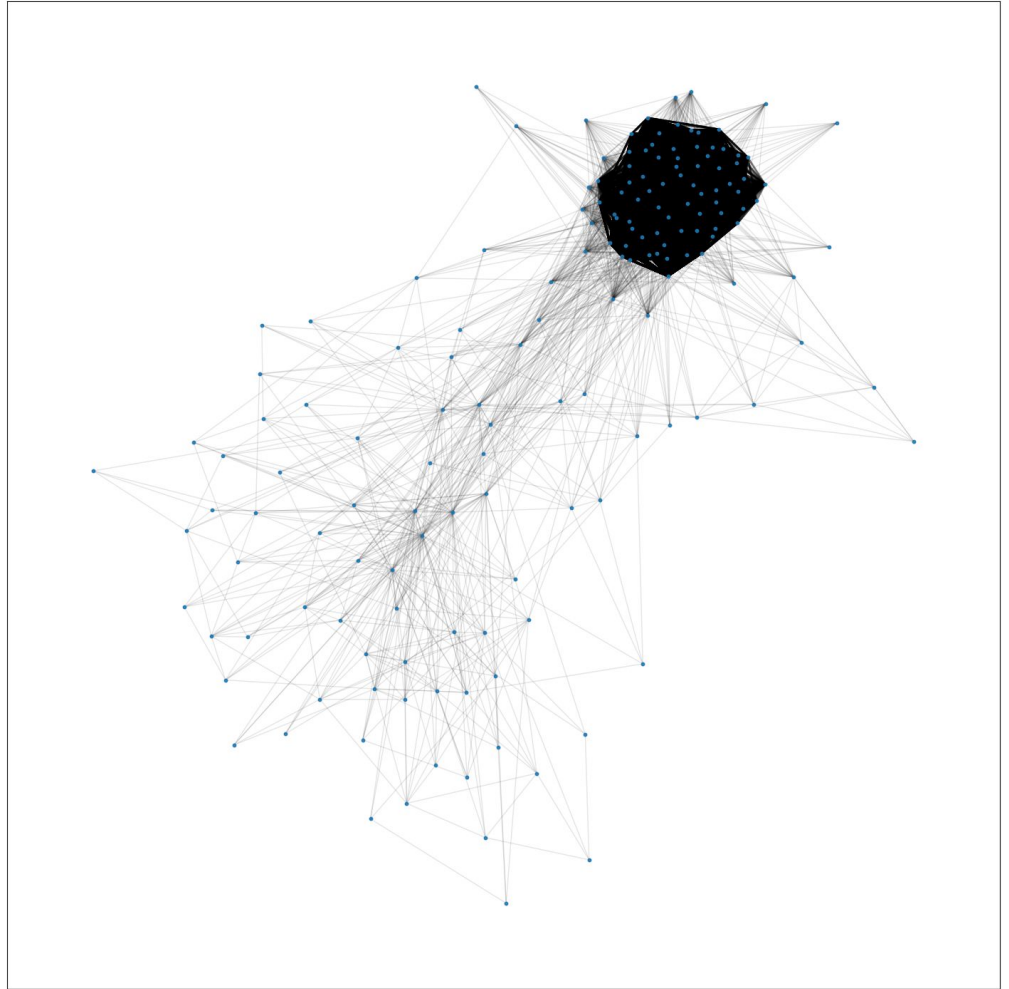


Graph where node size depends on **PageRank** score

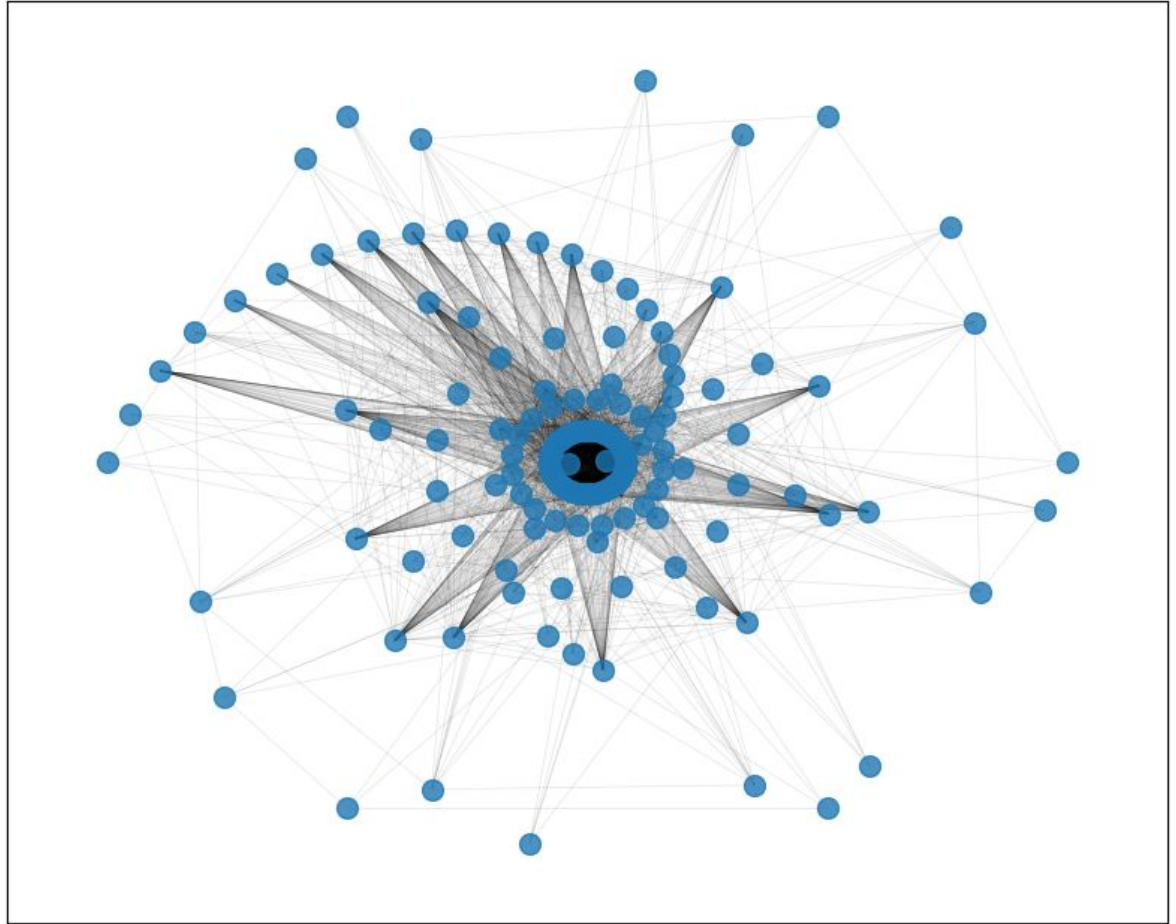


Cliques

42 cliques with length > 50

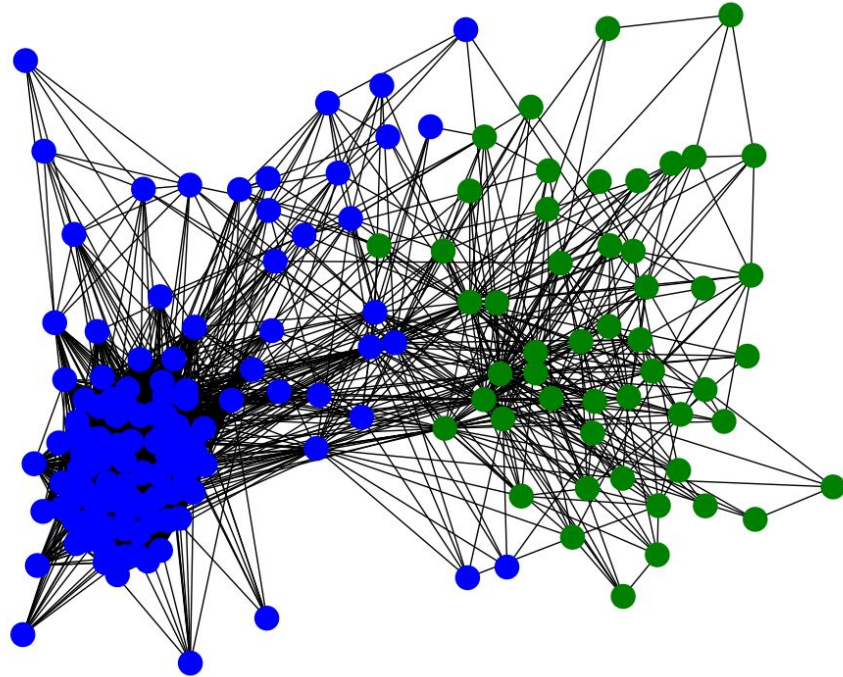


K cores visualization



Girvan Newman community detection algorithm

Modularity score: 0.13



Label Propagation algorithm

Modularity score: 0.15

