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Network summary

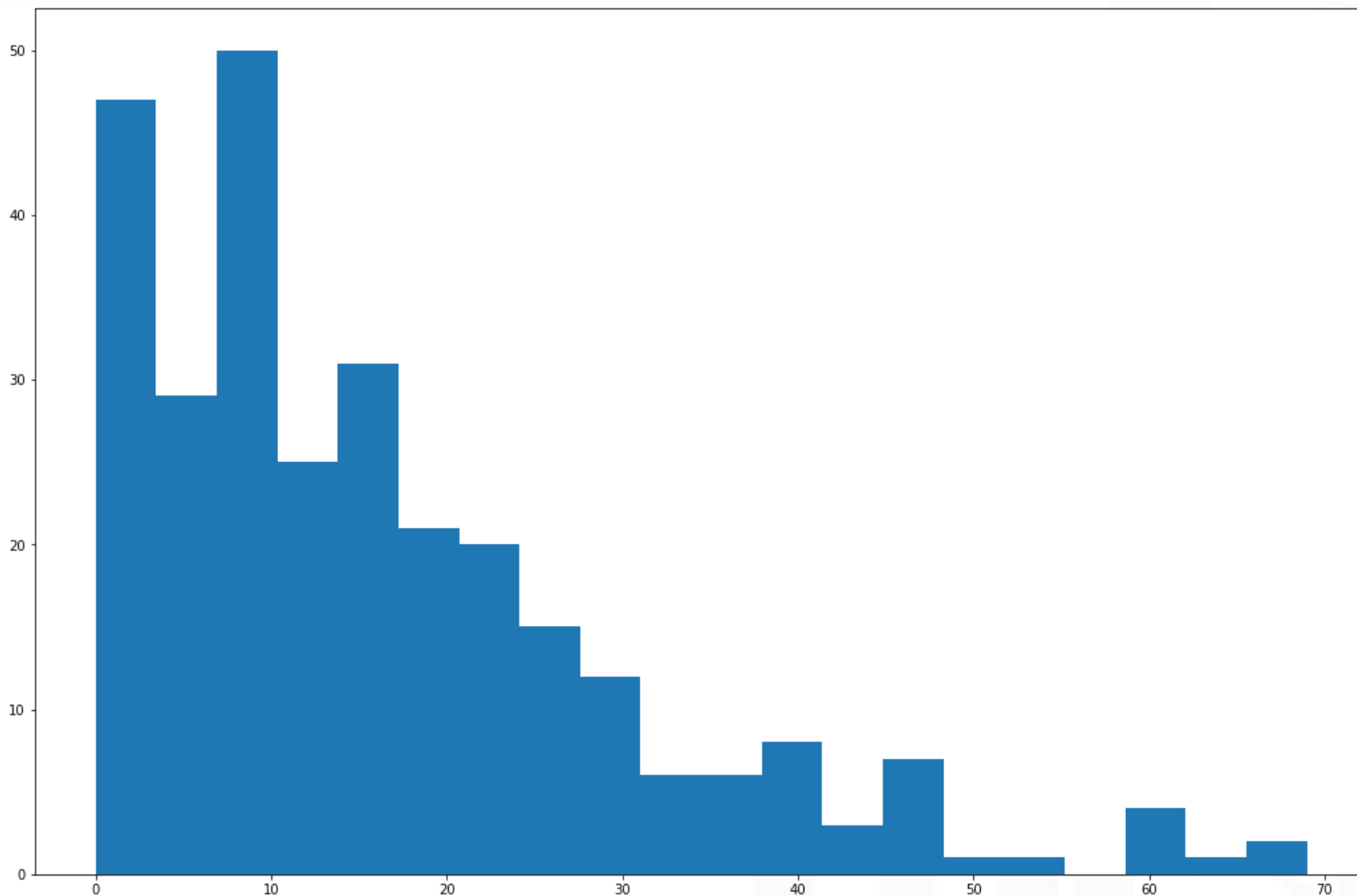
vk friends graph

Author: Laptsev Rodion

1. Basic network characteristics
2. Degree distribution
3. Nodes similarity
4. Nodes centrality
5. Assortativity
6. Community detection

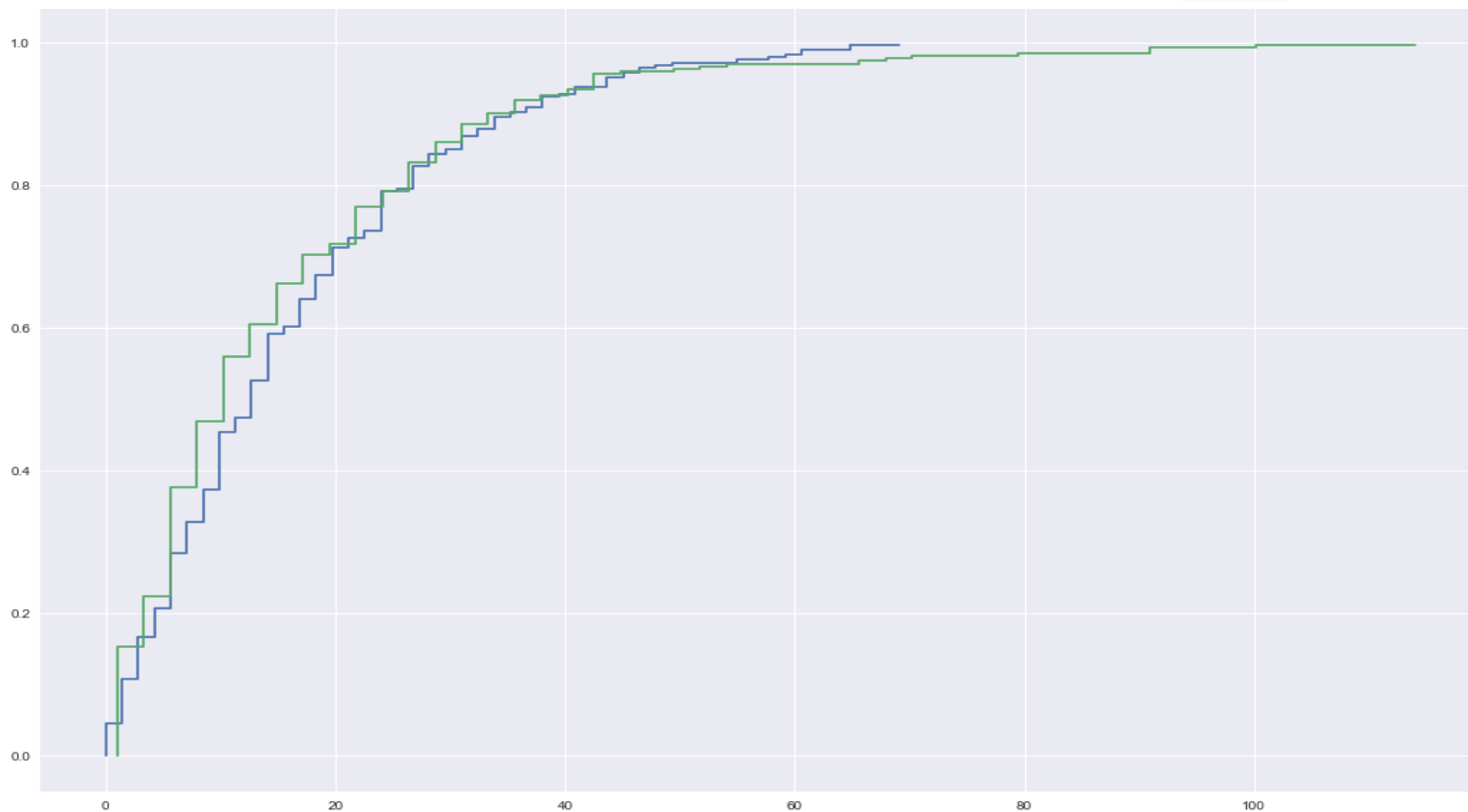
- nodes — 289
- edges — 2361
- radius — 5
- diameter — 10
- clustering — 0.52
- average shortest path length — 3.8

PDF degree distribution

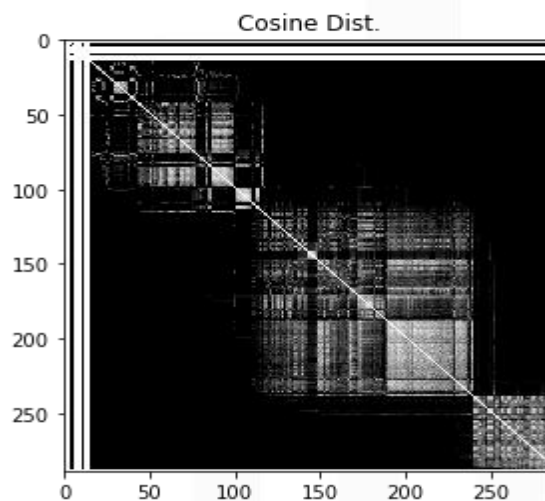
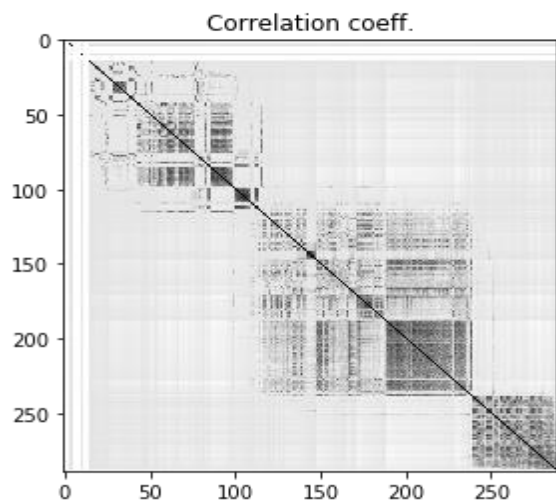
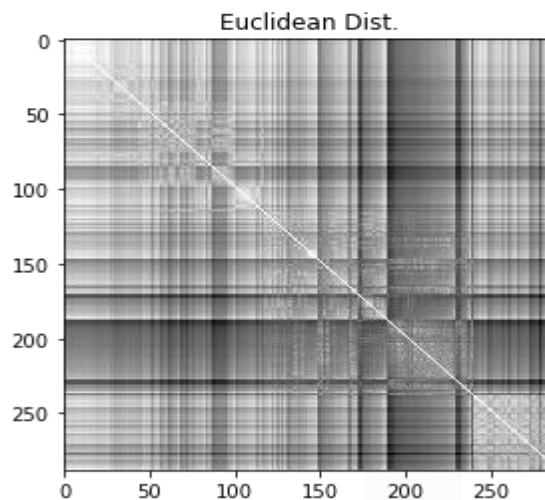
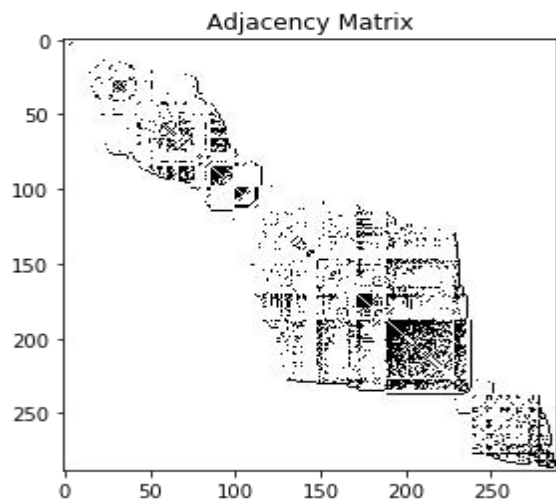


CDF degree distribution

Blue-real, green-generated geometric

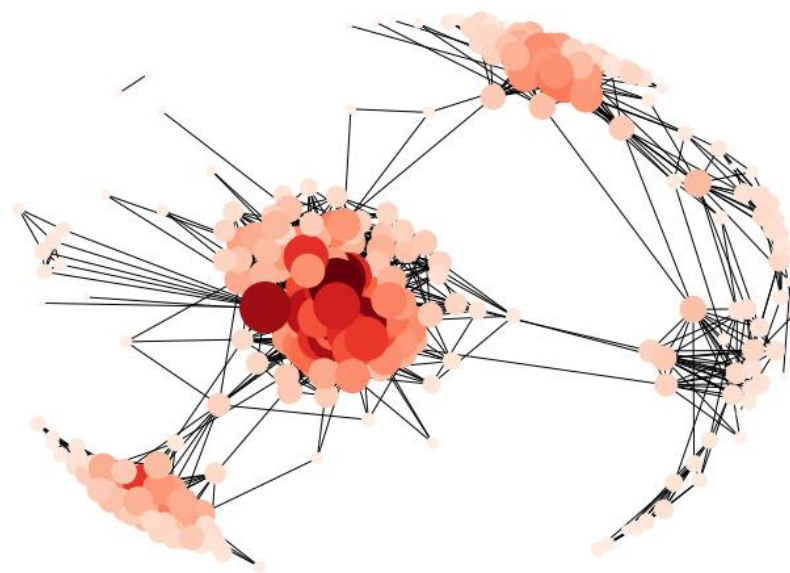


Nodes similarity



Degree centrality

Andrey Prudnikov 0.211805555556
Igor Shapovalov 0.211805555556
Sofya Timofeeva 0.225694444444
Igor Trefilov 0.229166666667
Sergey Kucherenko 0.239583333333



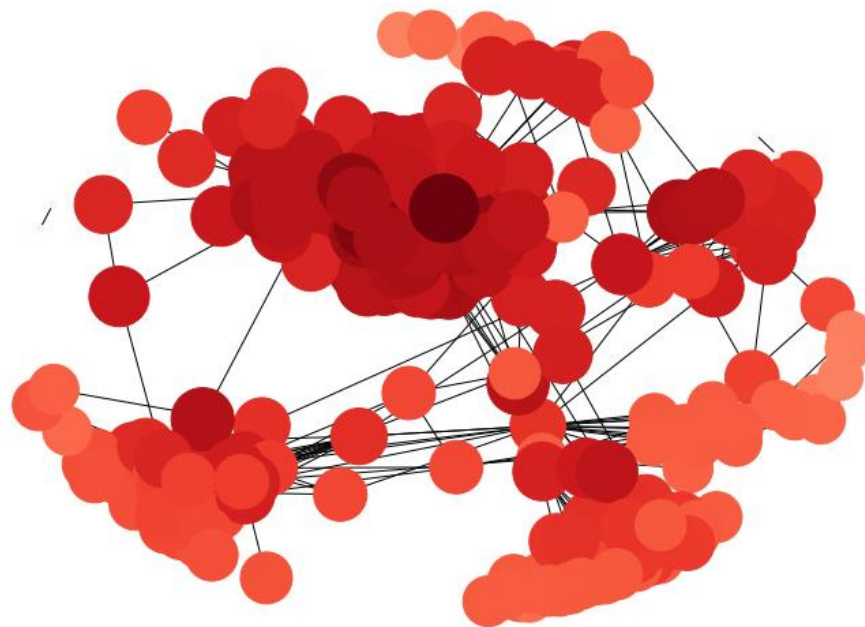
Sergey Kucherenko 0.345280764636

Ksenia Chistyakova 0.35142118863

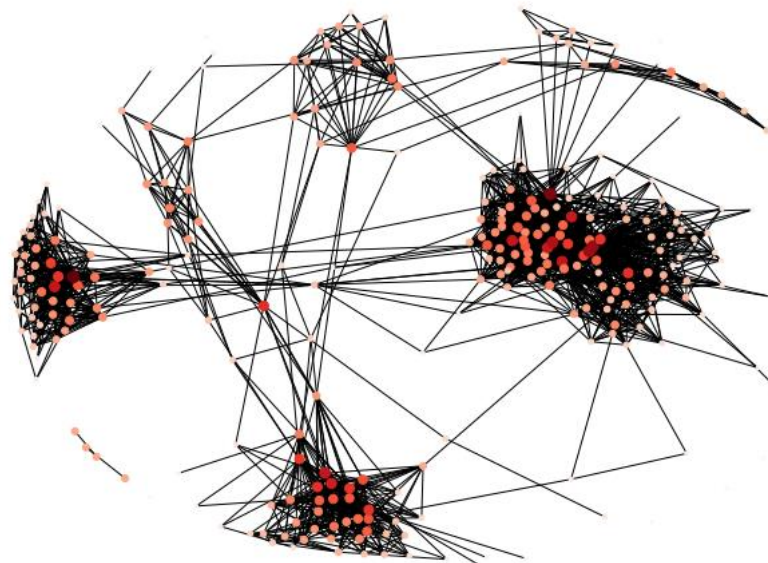
Ivan Suchilin 0.357783967812

Igor Shapovalov 0.360799001248

Igor Trefilov 0.366460611824



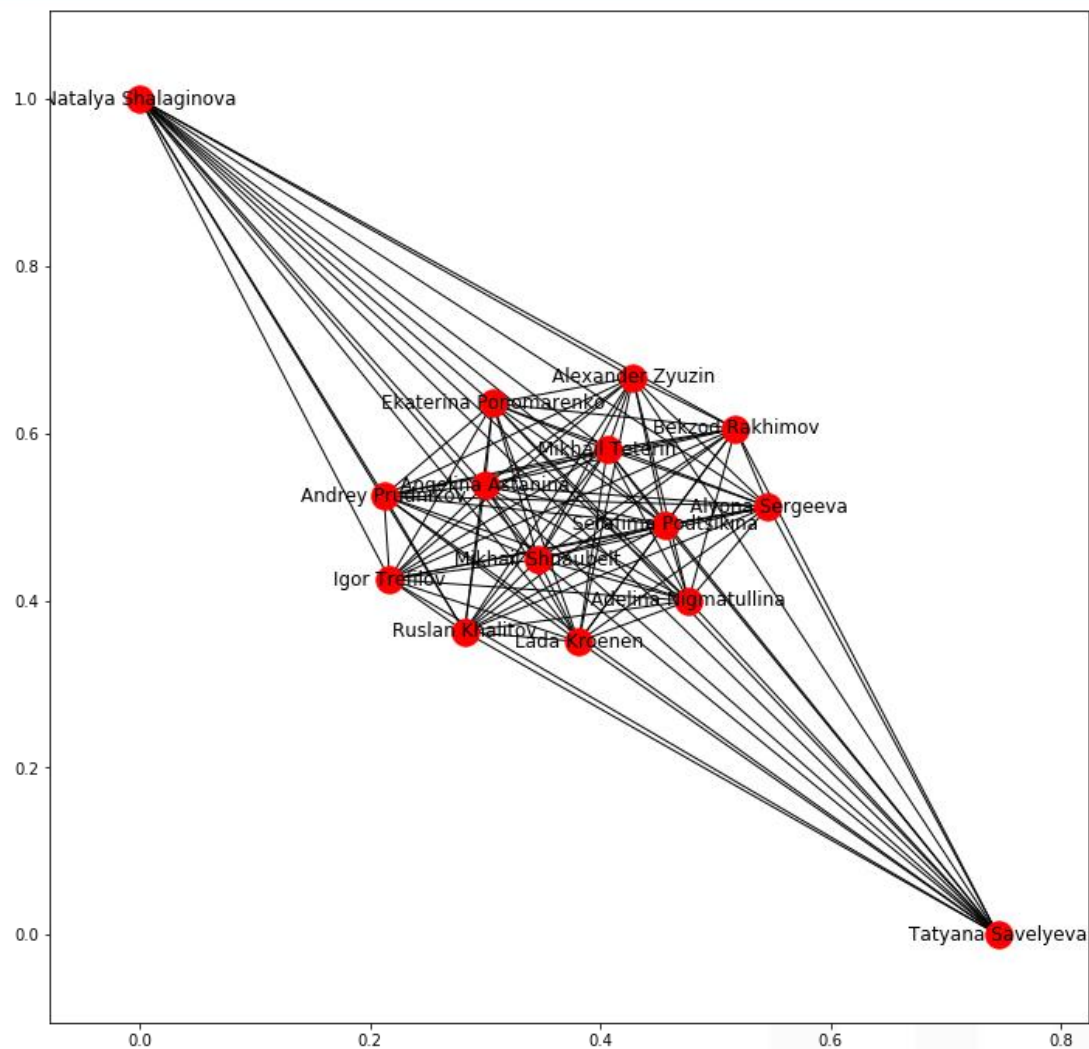
Sofya Timofeeva 0.00890301936916
Sergey Kucherenko 0.00934750847174
Igor Trefilov 0.00946900941448
Igor Shapovalov 0.00999458446013
Dmitry Meynster 0.0104643412476



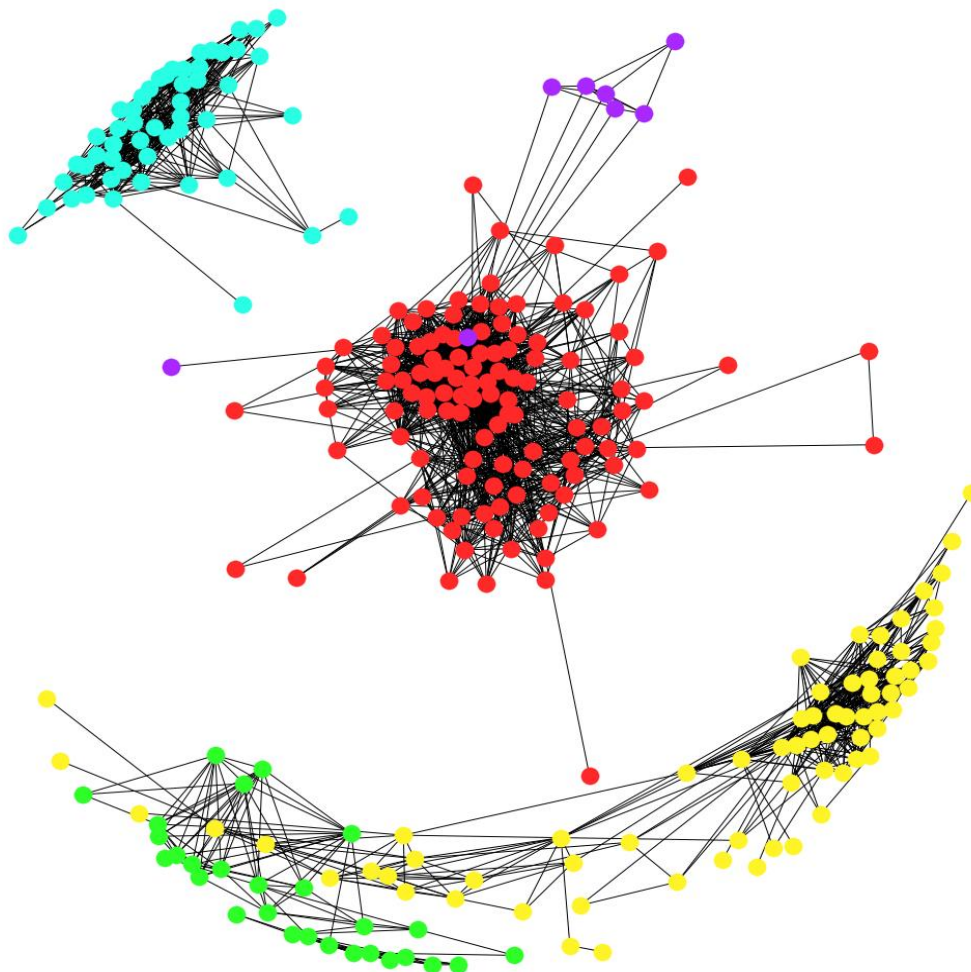
1. Degree 0.27
2. Sex 0.2
3. City 0.19
4. University 0.20

3 and 4 are low because of
Insufficient user information
(a lot of zeroes in both variables)

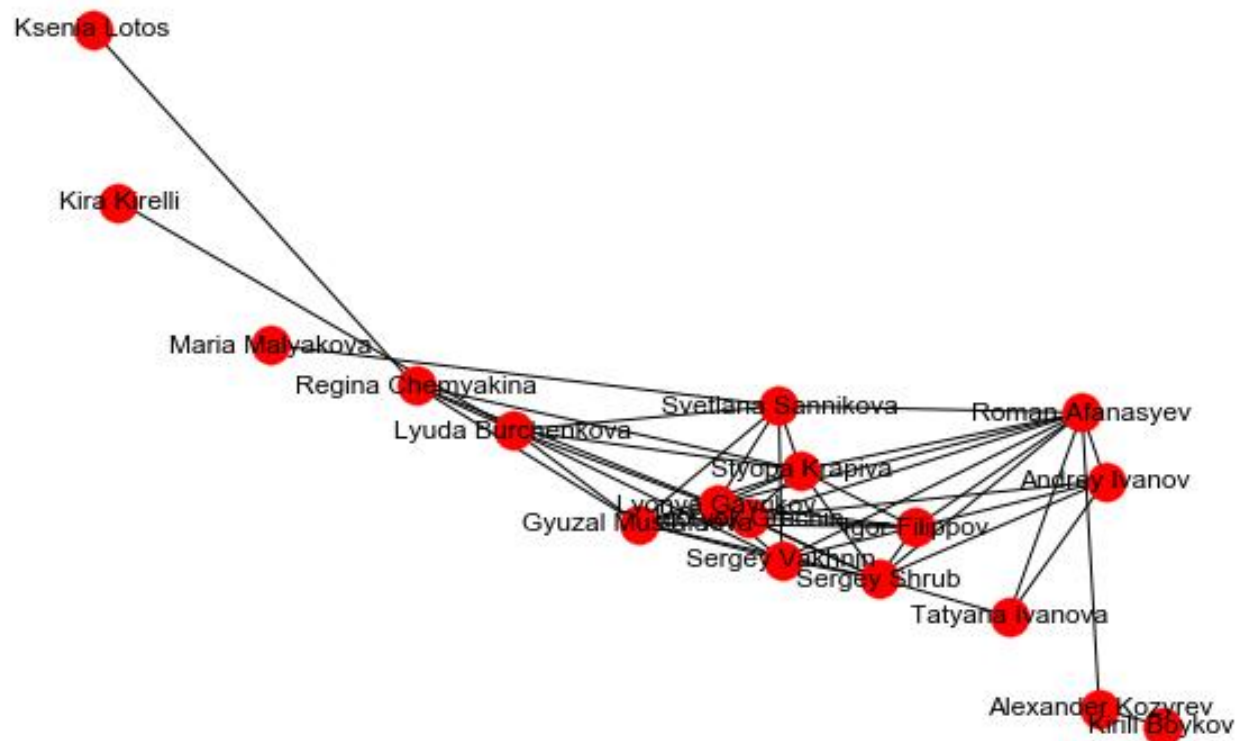
Clique search



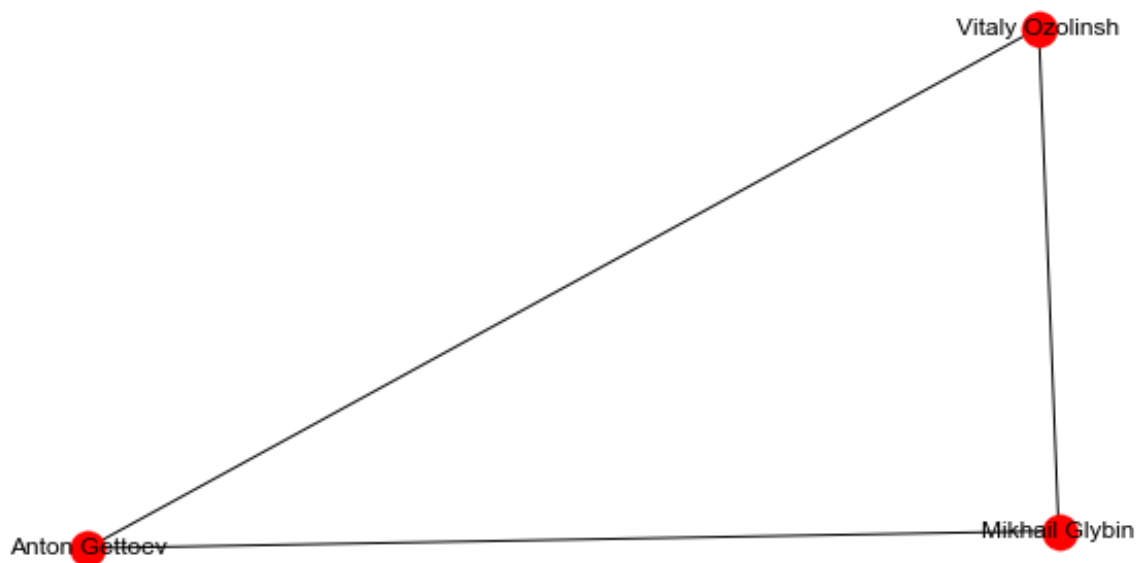
- Red – SPB
- Yellow – PSK school
- Green - PSK other
- L_Blue – MSK FCS
- Purple- Mafia



Communities detection (edge_betweenness)



Communities detection ($k_clique_communities$)





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Thank you
for your attention!