

Community-scale Online Network Analysis of Social Data Streams

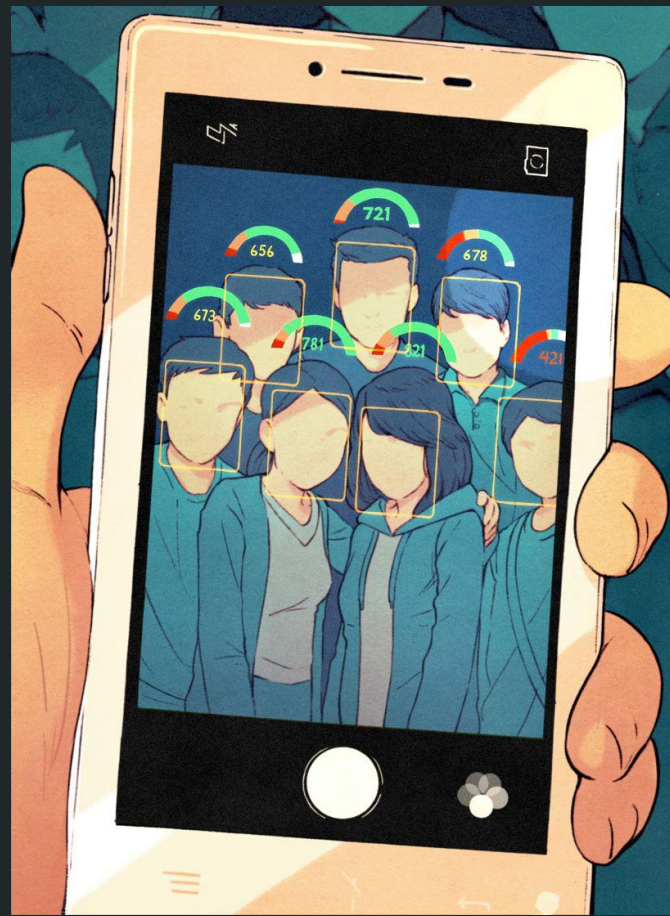


Ammar Raşid
Abdullah Secer
Abdurrahman Aboudakika
Ahmet Öztemiz
Mustafa Bera Akay

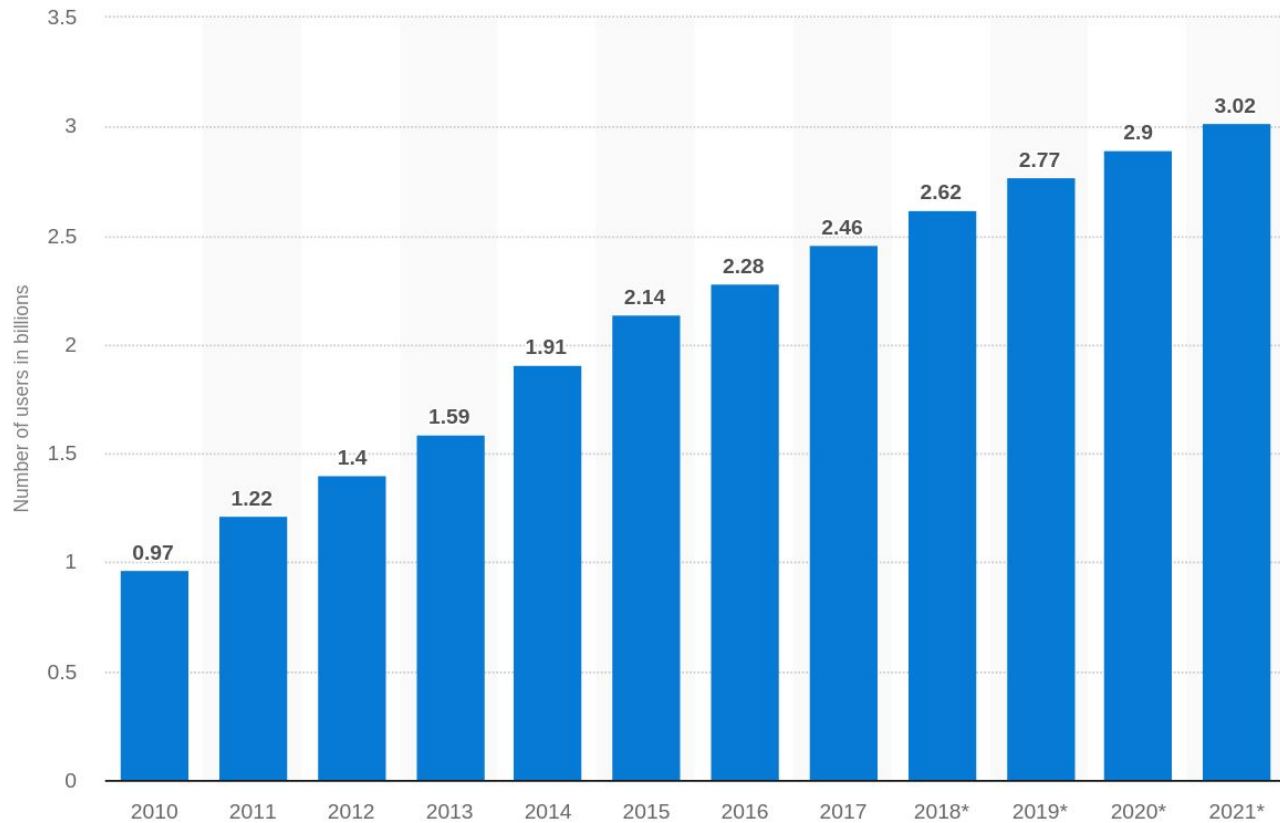
Outline

- Introduction & Motivation
- Methodology
- Findings and Discussion
- Conclusion

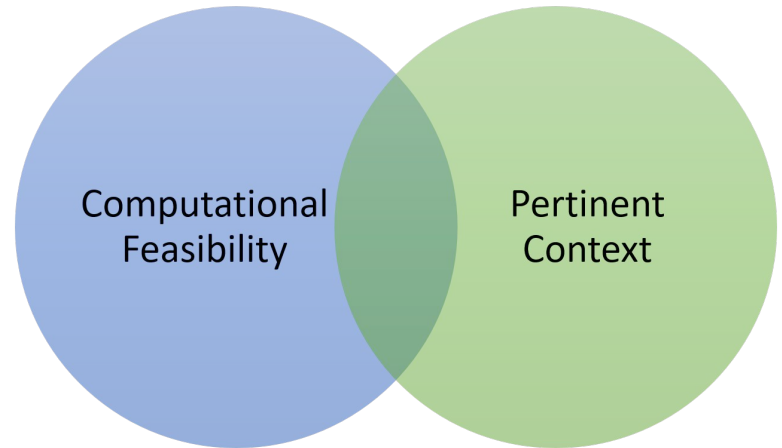
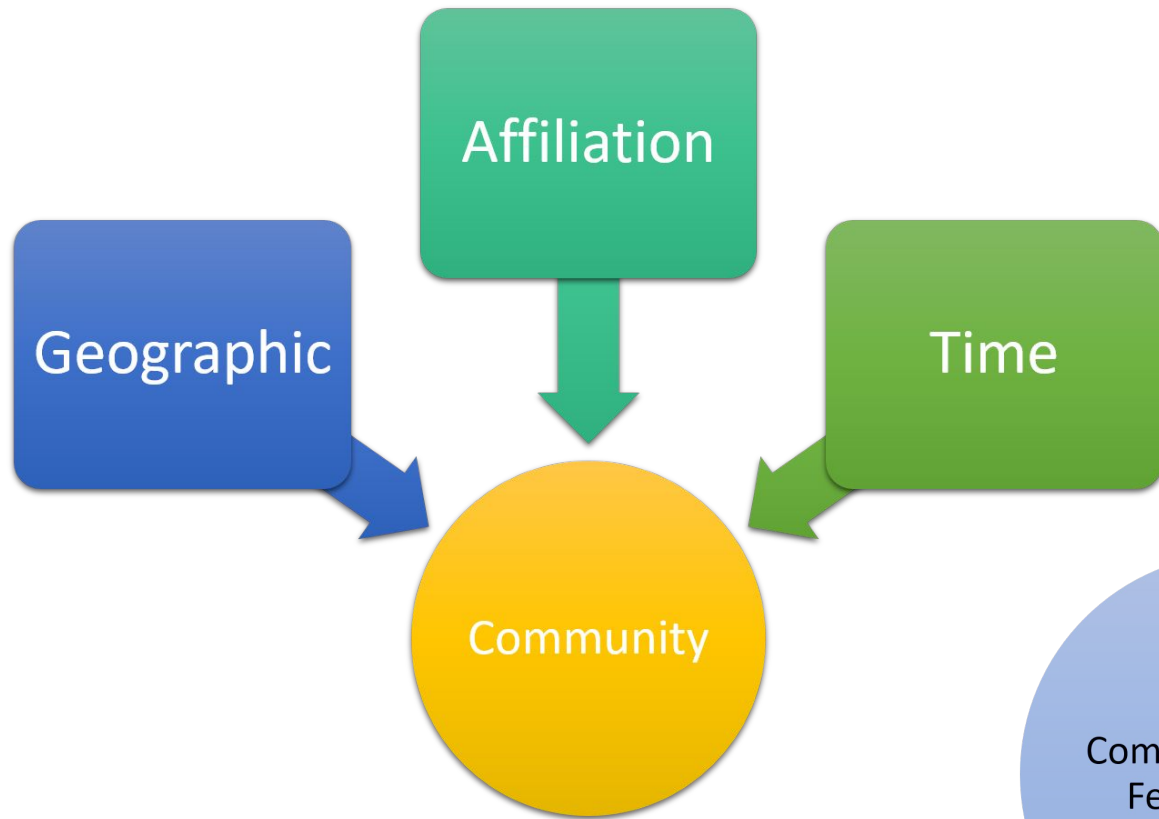
Introduction & Motivation



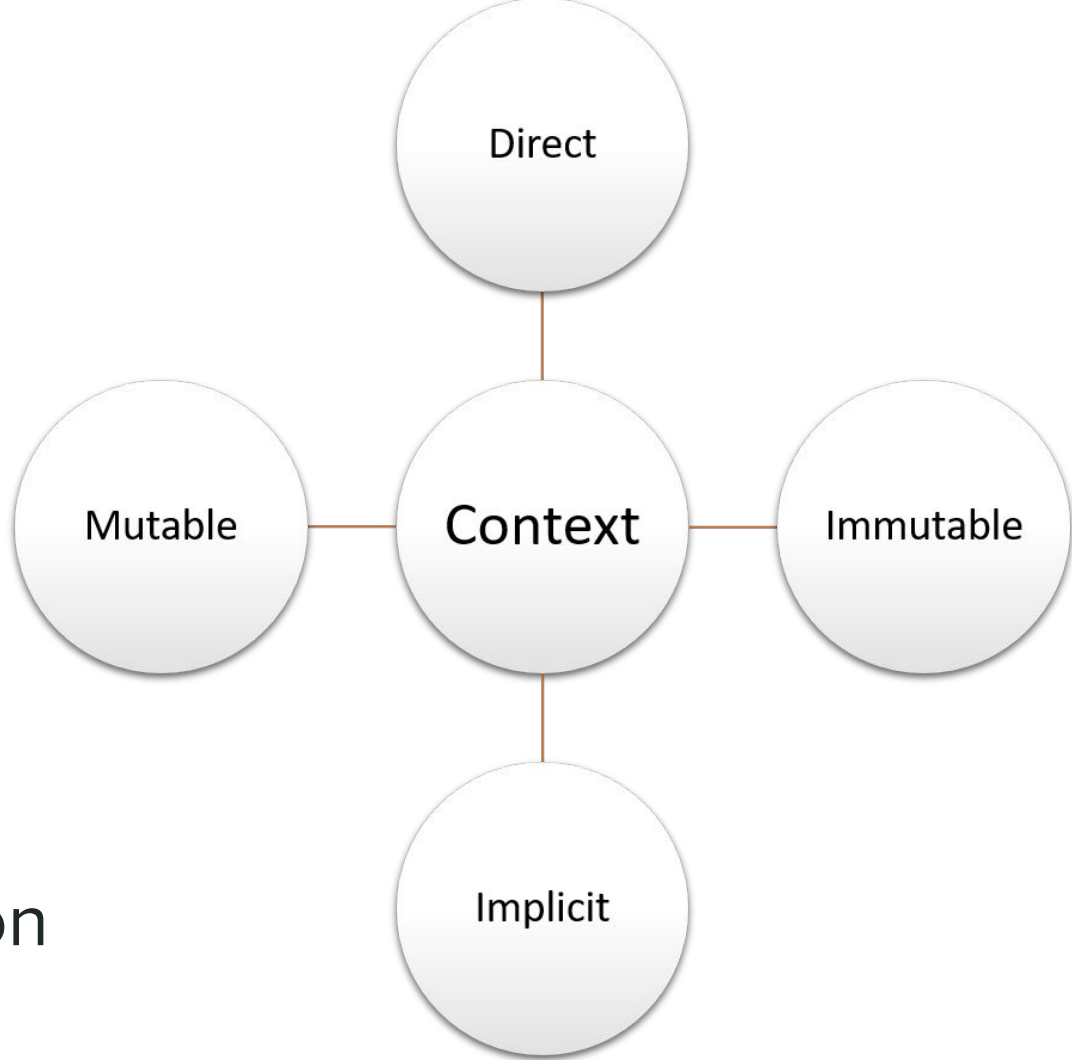
China's Social Credit system



Infeasibility: Computational & Conceptual

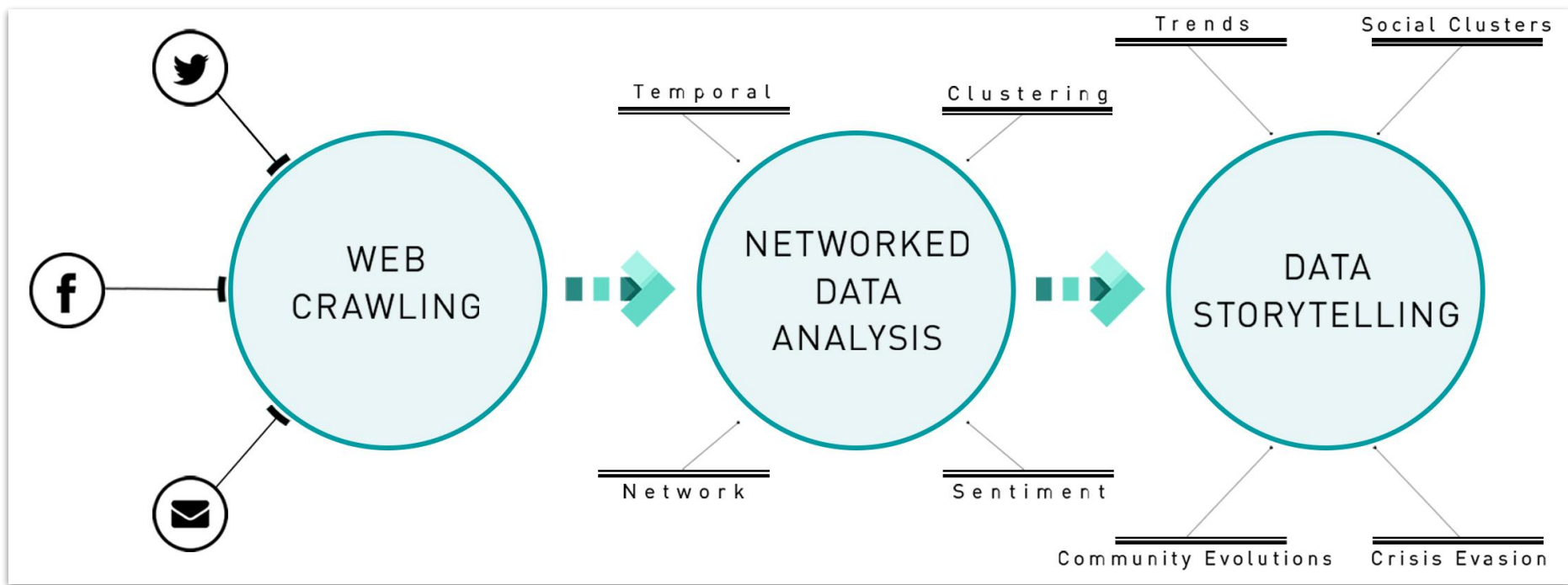


Community Classification

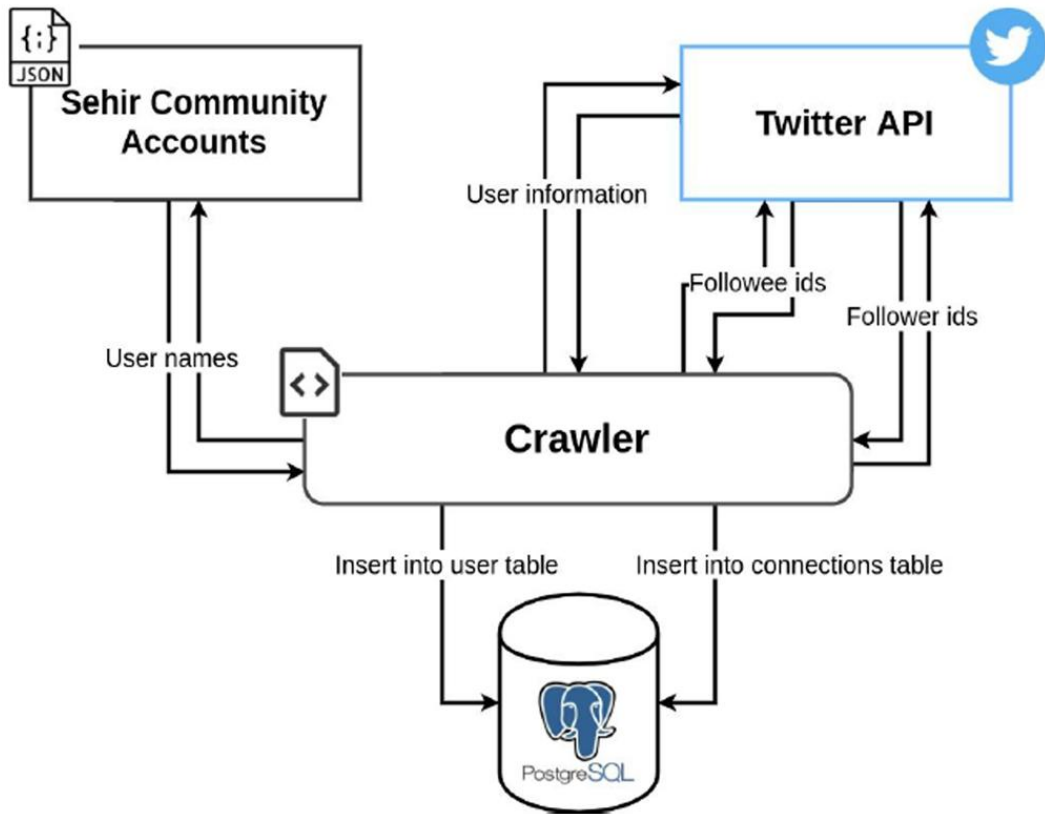


Context Classification

Methodology



System Overview



Web Crawling

	Affiliation Netw.	Users Netw.
Nodes	1041	554
Edges	2286	951
Degree	4.39	3.43
Betweenness	$6.6\text{e}-4$	$9.6\text{e}-4$
Pagerank	$9.6\text{e}-4$	$1.8\text{e}-3$
Closeness Cent.	0.0912	0.0617
Eigenvector Cent.	$8.7\text{e}-3$	0.014
Clustering Coeff.	0.306	0.113
Transitivity	$5.14\text{e}-2$	$455-2$
Modularity	0.4535	0.619
Diameter	7	8

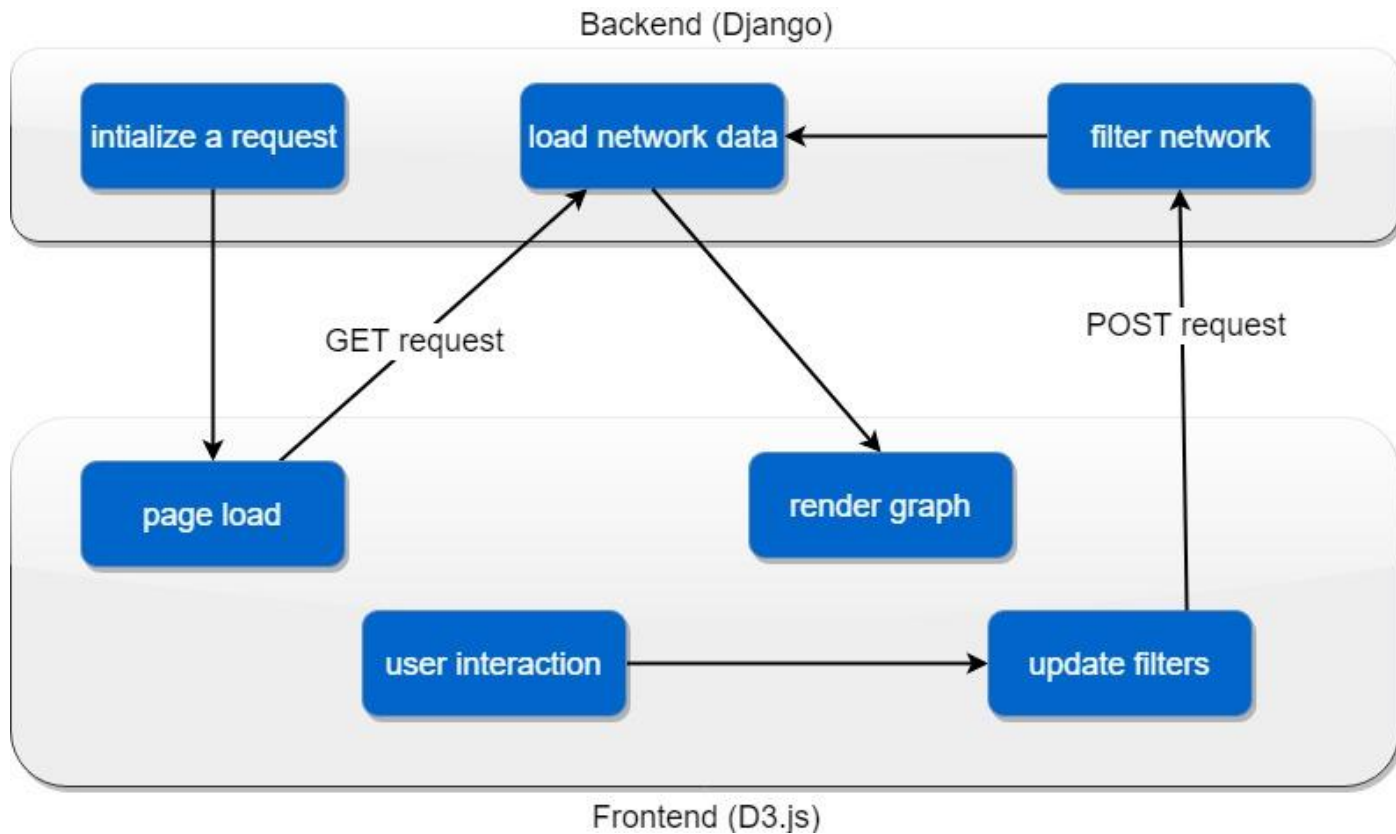
Table 1: Network state on 24/05/2018

Static Network Analysis

	CMER	HFN	Homophily
Affiliation Netw.	0.48250	0.38277	Weak
Users Netw.	0.51735	0.39109	Weak

Table 2: *Homophily* in the network

Temporal Network Analysis



Data Storytelling

Find Node

Reset

Date: 2018.05.24

Recalculate node metrics: ☒

Include community accounts (e.g. clubs): ☒

degree: 7.254098360655738

betweenness: 0.00535429639999933

pagerank: 0.0040983606557377025

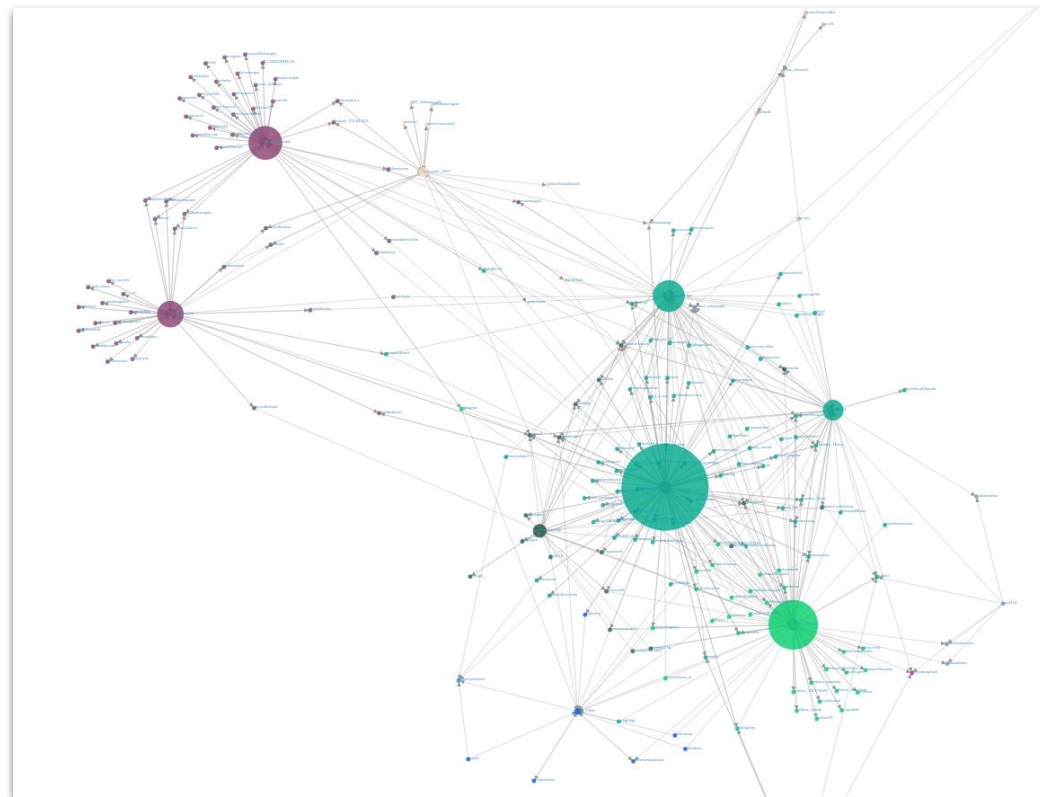
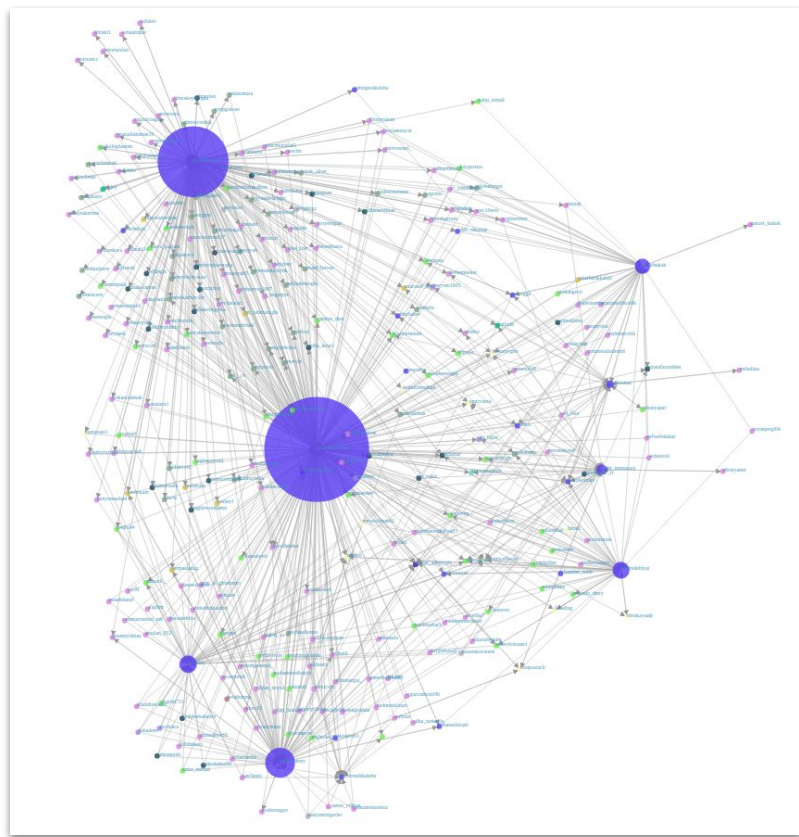
closeness: 0.22855793585206302

eigenvector: 0.028431317400879667

Clustering Coefficient: 0.7219130650905823

Nodes size by: ☒ degree ☐ in_degree ☐ out_degree ☐ betweenness ☐ closeness_centrali

Network Filters



Network Screenshot

Findings and Discussion

Conclusion
