

Social Networks & Recommendation Systems

XII. Social networks.

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MSc program in Data Science has been developed
as a part of task 10 of the project
„NERW PW. Science - Education - Development - Cooperation”
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Before classes

Read

[https://neo4j.com/blog/
story-behind-russian-twitter-trolls/](https://neo4j.com/blog/story-behind-russian-twitter-trolls/)

[https://www.nbcnews.com/tech/social-media/
now-available-more-200-000-deleted-russian-troll-tweets](https://www.nbcnews.com/tech/social-media/now-available-more-200-000-deleted-russian-troll-tweets)

Download

[http://nodeassets.nbcnews.com/
russian-twitter-trolls/tweets.csv](http://nodeassets.nbcnews.com/russian-twitter-trolls/tweets.csv)

[http://nodeassets.nbcnews.com/
russian-twitter-trolls/users.csv](http://nodeassets.nbcnews.com/russian-twitter-trolls/users.csv)

Lecture

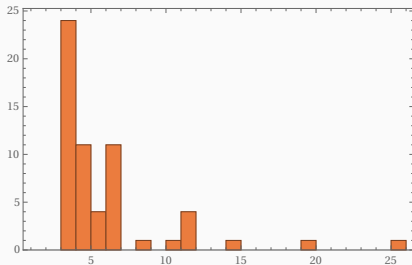
During previous classes we learned about

- networks models,
- networks metrics,
- agent-based models and other dynamical processes on networks.

Networks models for social networks

Evolving network...

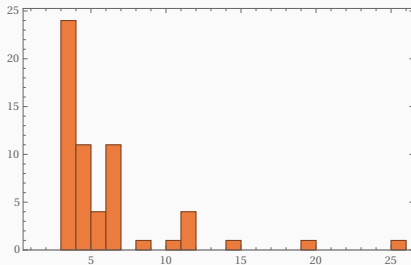
... with preferential attachment rule. Sounds familiar?



Networks models for social networks

Evolving network...

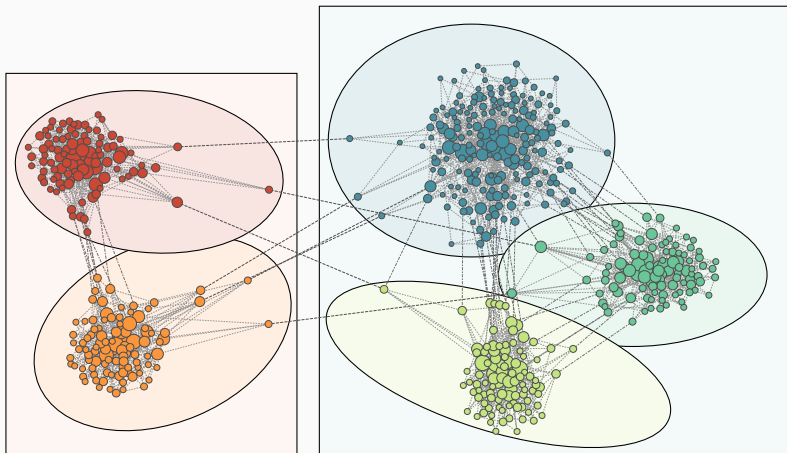
... with preferential attachment rule. Sounds familiar?



Evolving network...

is an example of the temporal network because it change over the time.

Social networks have rich community structures



Social networks have rich community structures

Community structures aka:

- information bubbles,
- filter bubbles,
- social circles,
- echo chambers...

There are different processes occurs in social networks:

- news (posts, gossips, etc) dissemination,
- friendship dynamics,
- echo propagation,
- fake news and real news,

One can analyze them in both ways:

- From the data perspective (description and explanation) and
- from the model perspective (modeling and prediction).

Thank you for your attention!



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