

Social Networks & Recommendation Systems

VIII. Hierarchical, layered and temporal 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”
co-funded by European Union from European Social Fund.

Project

Project tasks

- P8.1 Prepare a code which draw for given network plot of the relation $C(k)$. [20%]
- P8.2 Find examples of hierarchical and non-hierarchical networks in available repositories, check by drawing graphs from the task P8.1. [10%]
- P8.3 Load (perhaps a sub-) set of stops from the data provided by ZTM Warszawa on the website www.ztm.waw.pl/pliki-do-pobrania/dane-rozkladowe/. Draw graphs based on this set of vertices associated with the various types of mass transport. [50%]
- P8.4 Calculate the basic characteristics of each layer, and the whole network. [20%]
- P8.5 Translate GPS coordinates to configuration of the vertices and draw graph in proper, geographic, configuration. [30%]

- P8.6 Taking into account the time table data, obtain the temporal network from the graphs from the previous task. [20%]
- P8.7 Make an animation of how traffic flows throughout the day. [30%]
- P8.8 Check how the selected network metrics depend on time. [20%]
- P8.9 Working in groups, let's ask ourselves a simple research question about the ZTM network and try to answer it! [50%]

Thank you for your attention!



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