

Analysis of Jazz Musicians Network

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Subject



- ▶ Specificity of jazz musician network compared to other music style
- ▶ Musicians play in many different bands
- ▶ Band characterized by the instruments, its jazz style and the city where it comes from (all are linked)

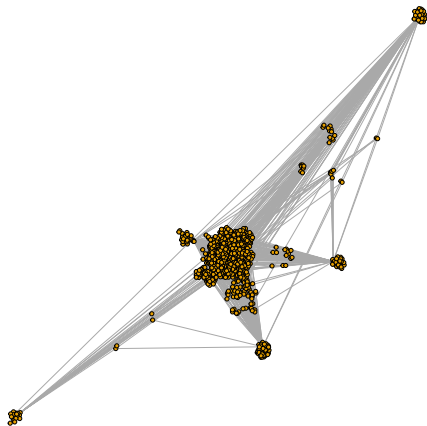
Questions

- ▶ What is the probability to play in a band when come from the same city ?
- ▶ How far are people playing the same instrument in the network ?
- ▶ Do some musician playing a given instrument distinguish by their connections ?
- ▶ Identify the Central artists
- ▶ What are the drivers of the composition of a band ? (city of birth, style, instrument)

Data

- ▶ <https://linkedjazz.org/network/>
- ▶ Vertices : Musicians
- ▶ Edges : Musicians have played in the same band
- ▶ Additional data : instrument, city, birth year, style (scrapped from <http://wiki.dbpedia.org/>)
- ▶ About 1000 musicians in the US

Data



Techniques

Descriptive analysis

- ▶ Visualization at the level of cities
- ▶ visualization at the level of styles
- ▶ centrality measures to identify central artists
- ▶ Graph partitionning (identify cohesive subset of vertices)

Inference

- ▶ Logistic regression to see whether being born in same city has an influence on playing in the same band (same thing with style, instrument)
- ▶ Compare statistical clustering and labelling with city and/or style