

Visualization

Network Science Bootcamp 2021
Hong Qu

“The goal of visualization is to aid our understanding of data by leveraging the human visual system’s **highly tuned** ability to **see patterns**, **spot trends**, and **identify outliers**.”

–Jeffrey Heer, Michael Bostock, Vadim Ogievetsky

[A Tour Through the Visualization Zoo](#)

Mathplotlib

- [Networkx drawing](#)
- [Python Graph Gallery](#)
 - [Matplotlib](#)
 - [Network Charts](#)
- [Cheat sheet](#)

write_gexf

```
write_gexf(G, path, encoding='utf-8', prettyprint=True, version='1.1draft') \[source\]
```

Write G in GEXF format to path.

“GEXF (Graph Exchange XML Format) is a language for describing complex networks structures, their associated data and dynamics” [\[1\]](#).

- Parameters:**
- **G** (*graph*) – A NetworkX graph
 - **path** (*file or string*) – File or file name to write. File names ending in .gz or .bz2 will be compressed.
 - **encoding** (*string (optional)*) – Encoding for text data.
 - **prettyprint** (*bool (optional)*) – If True use line breaks and indenting in output XML.

Examples

```
>>> G=nx.path_graph(4)
>>> nx.write_gexf(G, "test.gexf")
```

Gephi

- [Simple Gephi Project from A to Z](#)
- [Network visualization with Gephi](#)
- [Animate Dynamic Graphs with Gephi](#)

Kumu

- [Celebrity Ice Bucket Challenge](#)
- [AI Ethics & Governance Map](#)
- [A Network of Game of Thrones](#)

Flourish Studio

- [Seinfeld graph - example of triadic closure](#)
- [Network Diagram of Scientists and Journalists](#)
- [Research collaboration between countries, Sankey](#)

R and ggplot

- [Static and dynamic network visualization with R](#)
- [From Data to Viz Network Diagram](#)
- [R graph gallery](#)
- [ggnet2: network visualization with ggplot2](#)
- [Network Analysis in R](#)
- [RPubs Intro to networks in R](#)

CS 7295: Special Topics in Data Visualization - Visualizing Layered Network

Instructor: Prof. Cody Dunne a.k.a. Cody Scott

Time: M/W 2:50–4:30 pm

CRN:15742

Description:

Students will explore algorithms, techniques, and tools for visualizing layered networks as part of a project- and discussion-based course.

<https://visualization.khoury.northeastern.edu/teaching/>

Visual Complexity

<http://www.visualcomplexity.com/vc/>

