ABSTRACT

Data visualization is a rapidly expanding field whose skills, techniques and insights are increasingly intertwined in disciplines across and beyond academia. Given the interdisciplinary nature of data visualization, libraries are uniquely situated to support building skills and communities of practice in this area.

A growing number of academic libraries provide instruction, consultation, technology, and spaces to support data visualization as part of a broader expansion in library data services. Since few graduate programs in library science offer training in data visualization, many later career librarians are finding it necessary to develop data visualization skills on the job.

Due to factors, including lack of resources, time, and training opportunities, one of the great challenges for researchers and librarians is developing the necessary skill set and expertise in data visualization to engage critically in the discipline.

This presentation will provide an overview of current visualization services in a number of academic libraries and the state of the field.

It will include an overview of opportunities and challenges as well as a discussion of ways that libraries can expand both their tool-based and critical support for data visualization and data visualization literacy.
The state of data visualization support in libraries

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University of Michigan

Angela Zoss
Duke University
Presentation Outline

- Results of 2017 survey of visualization in libraries
- Examples of current strategies
- Opportunities/challenges
2017 Survey of Visualization in Libraries

36 participants

30 institutions

Job title includes "visualization"

My position involves:

- consulting
- short workshops
- non-library visualization projects
- library visualization projects
- space/hardware training
- space/hardware management
- other

USA: 25
Canada: 4
Australia: 1
Training opportunities for librarians

American Library Association

Midwest Data Librarian Symposium

DATA SCIENCE AND VISUALIZATION INSTITUTE FOR LIBRARIANS

Southeast Data Librarian Symposium
Institutional Snapshot: Duke University

Covers data sources, GIS, visualization, data management, data science

Eric Monson

Angela Zoss
(now in Assessment & User Experience)
Short introduction to visualization best practices

- A simple **one-hour** workshop to cover basic tips and tricks
- **No tools**, so easy to deliver without technology
- Includes **handout** and sample charts in Excel file
- Advertises other services, like **consultations**

https://duke.box.com/v/IntroDataVisS18
Poster design as the workhorse

- A widely-needed and transferable skill
- Introduces basic principles of graphic design
- Can target specific groups that are required to make posters
- Challenge: faculty-created poster templates
- Opportunity: translate poster workshop content to slideshows, infographics

Community building

- Weekly talk series
- Various topics
  projects with vis focus,
  tool highlights, lectures
  from related fields
- Helps to have food!

Visualization Friday Forum
Fridays at noon
LSRC D106

http://vis.duke.edu/FridayForum
Institutional Snapshot: UCLA/USC
Tools & skills covered

Project-based, process-oriented: DResSUP staff structure the workshops around the projects that graduate students propose. Rather than doing projects for you, we train you on tools and methods that will bring your project and skills to the next stage.

➡️ Project management & organization
Platforms such as Open Science Framework and Git/GitHub to manage workflow, store and organize project files, code, as well as communications and output.

</> Collecting & creating data
Capture structured data from the world?wild? web using web-scraping and indexing tools and techniques, or creating your own data through markup, description, etc.

➡️ Cleaning & structuring data

➡️ Analyzing & visualizing data
Explore and analyze data using spatial mapping, networks, and text-mining; and explore visualization techniques and tools to identify and analyze patterns.

➡️ Sharing research & data
Promoting open, sharable data and making your research available in various web-based platforms and formats.

➡️ Connecting & community
Join a dynamic community of researchers and expert library staff working with data-intensive projects and tools.

http://dressup.library.ucla.edu/
Bringing R to a writing course at USC: An experiment in information literacy
EMBEDDED LEARNING
Institutional Snapshot: Michigan
Tech and Texts is an open seminar/workshop hosted by the University of Michigan Library to explore applied technology and theory. This semester our focus will be on text analysis. Over the course of the Fall 2017 semester we will meet every other Wednesday from 10:30am-12:00pm to discuss, explore and experiment with various computational textual analysis technologies and theoretical texts. Meetings will be held in the Clark Library Presentation Space (2 South Hatcher).

Meetings are open to anyone at any skill level. It is not necessary to attend all meetings; please join us as you have time and interest. The text discussions will include a brief introduction to the reading. Tech explorations will be in an open format for experimentation and shared learning (please bring a laptop). If you have any questions about the series you can contact Justin Joque (joque@umich.edu) or Alex Keener (alxkee@umich.edu).

PDFs of all of the readings are available. Please register by filling out this form and we will give you access to downloaded them. Last years schedule is available here.

Fall 2017 Schedule:

September 20th - Overviews: Bookworm and Google Ngram Viewer
HathiTrust Research Center Bookworm
The Digital Projects Studio is part of the University of Michigan's Clark Library. We provide tutorials and support for visualization work. Connect to our workshops and projects below, or peruse our blog for additional information.

**Workshops**

- **arc_gis**
  - Introductory resources for learning GIS with ArcGIS Desktop.
  - More

- **complex_mapping**
  - A workshop on creating maps in ArcGIS from complex and multivariable datasets.
  - More

- **cytoscape**
  - A workshop for network analysis using the free and open source software Cytoscape.
  - More
Challenges/Opportunities
Challenge: From tools to literacies

tools are easy, literacies are important
Challenge: From silos to networks

(basically, “data visualization librarianship” isn’t yet a community of practice)
What professional development resources would help you do your job more efficiently or effectively?

- Training
- Community of practice
- Shared instructional materials
- Shared techniques, best practices
- Library-specific information
- Time

28 total responses
IMLS Grant Proposal: Visualizing the Future

- National Forum Grant
- Proposed to start in spring of 2019
- Gather individuals working on visualization to create a framework for library support for data visualization