

## **Course Topics**

Each week the course combines data visualization theory with practical hands-on material and case studies.

Week 1 Data-Driven Decision Making, Visual Analytics Framework, Workflow Design

Week 2 "When": Temporal Data Analysis and Visualization

Week 3 "Where": Geospatial Data Analysis and Visualization

Week 4 "What": Topical Data Analysis and Visualization

Week 5 "With Whom": Network Analysis and Visualization

Week 6 Future Developments, Value Creation via Data-Driven Decision Making

**Next Offered:** 

January 20-March 1, 2020

**Register Online:** 

tinyurl.com/VACRegister2020S1

#### For More Information Contact:

Elizabeth Record recorde@indiana.edu

### Students will learn...

- to discuss data and visualization using a common language
- to evaluate data and visualizations, and communicate insights across the company
- to apply visualization theories and best practice when using industry standard tools like Tableau and D3
- to implement a proven usercentered visualization design process

# Case Studies: Solving Real-World Challenges

Students apply new knowledge and skills in projects that require identifying user needs and priorities; selecting the best data, algorithms, and workflows for temporal, geospatial, topical, and network case studies; communicating actionable insights using standard terminology; and gaining efficiencies for delivering high-quality results on time and on budget.



Monitor S&T Developments



Manage Communication Flows



Optimize Traffic Flows



Manage Customer Feedback



Improve Network Resilience



Develop Workforce

## **Related Books**

The following books are used extensively in the course. Discover these highly regarded, award-winning books at your favorite bookstore.



Atlas of Knowledge: Anyone Can Map

ISBN 0262028816



Atlas of Science: Visualizing What We Know

ISBN 0262014459



Visual Insights: Making Sense of Big Data

ISBN 0262526190

## Instructors

Learn from instructors with diverse backgrounds who are experienced researchers and educators deeply committed to providing industry leading instruction and support.



Katy Börner Instructor

Victor H. Yngve Distinguished Professor of Engineering and Information Science at the School of Informatics, Computing, and Engineering. Founding Director of the Cyberinfrastructure for Network Science Center (http://cns.iu.edu) at Indiana University.

- Research focus on development of data analysis and visualization techniques for information access, understanding, and management.
- Cyberinfrastructures development for large-scale scientific collaboration and computation.

**Michael Ginda**Assistant Instructor

Data analyst and research assistant with the Cyberinfrastructure for Network Science Center. He holds a Master's degree in Library Science from Indiana University.

- Research focus on knowledge representation and organization, metadata, and information networks.
- Lead instructional designer.



Andreas Bueckle
Assistant Instructor

PhD Candidate in Information Science at Indiana University focused on information visualization with a background in digital media.

- Research focus on information visualization, specifically in virtual and augmented reality.
- Videography and photography.





**Elizabeth Record** Associate Director



Bruce Herr II
Senior System
Architect / PM



**Leonard Cross** Senior Interaction Designer