CREATING DATA VISUALIZATIONS

IU visual analytics course leverages power of data for business, government partners
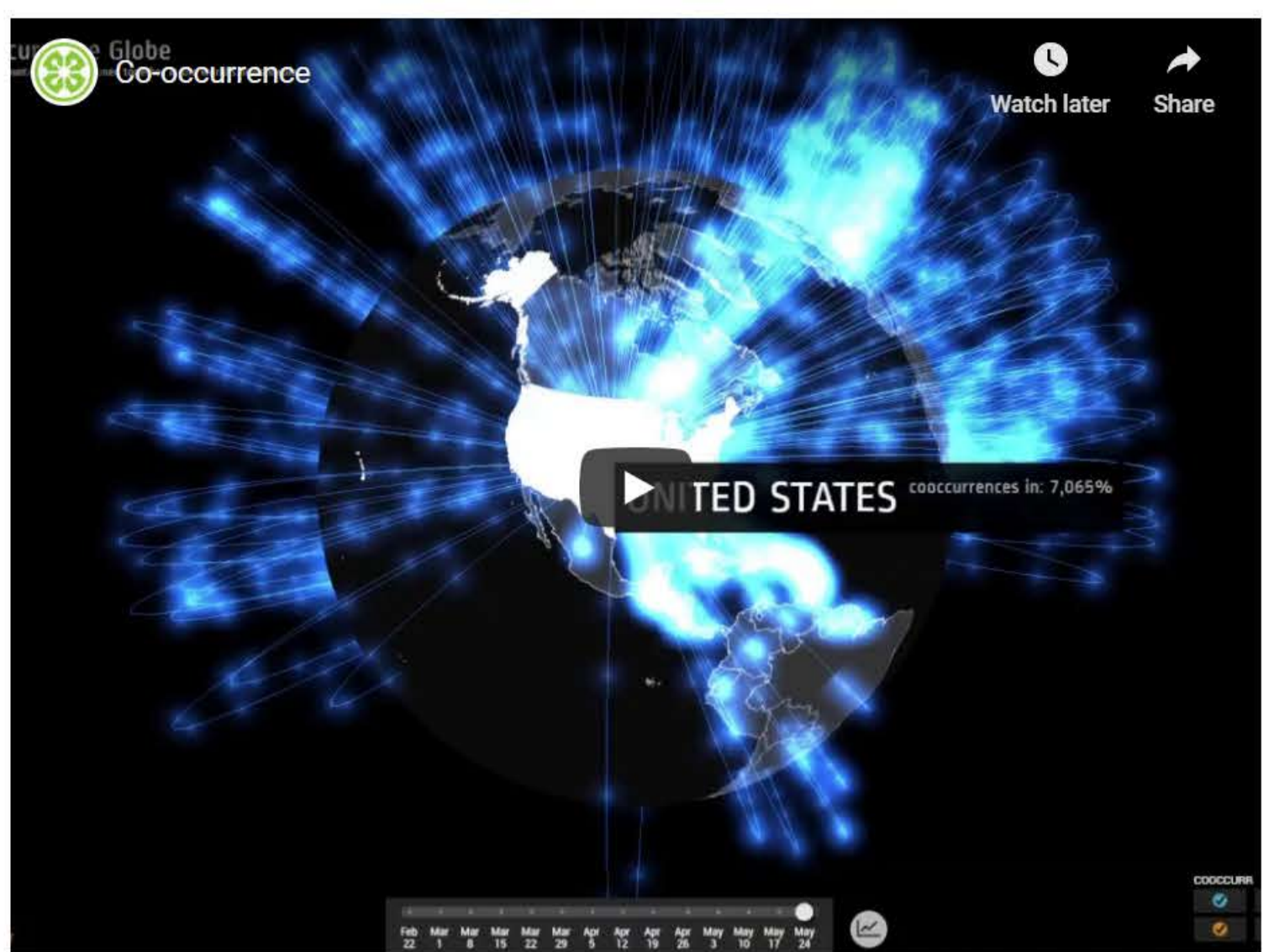
A data visualization on communication flows

IU is offering a Visual Analytics Certificate (VAC) course to help corporate, government, and international participants learn to translate complex data into actionable insights.

"The demand for data analysis skills has never been as strong as it is now, with industry transformation rapidly accelerating," said Andreas Bueckle, assistant instructor for the course and a Ph.D. candidate in information science at the Luddy School of Informatics, Computing, and Engineering at IU Bloomington. "This course, specifically designed for the working professionals, teaches participants how to evaluate data and data visualizations as well as how to more effectively communicate insights across a variety of business and government settings."

Offered through the Cyberinfrastructure for Network Science Center at IU's Luddy School of Informatics, Computing, and Engineering, the six-week, 30-hours online course focuses on understanding and creating data visualizations. Each week, the course combines data visualization theory with practical hands-on material and case studies to address real-world challenges. Course topics include:

- 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

Over 50 employees from the Boeing Company, Eli Lilly, the US Centers for Disease Control and Prevention, the Naval Surface Warfare Center, Crane Division, and others took the VAC class in fall 2020.

"The weekly curriculum was iterative and broad enough to keep me motivated while also allowing me to continue performing my professional responsibilities," said Jonathan Dilger, director of research at the NSWC, Crane Division, who completed the course in 2019. "For me, the course was excellent at delivering the theoretical framework for data-driven decision making using the Data Visualization Language framework."

"Providing professional development opportunities is an essential component in building successful and sustainable partnerships," said Valerie Gill, associate vice president of the Office of Business Partnerships at IU. "Through a coordinated approach across IU's campuses, our team helps to support industry partners, in part by sharing excellent opportunities to develop key skills such as this visual analytics course."

Participants who successfully complete the course receive a professional certification in visual analytics. Another VAC course will be offered in January-February 2021. For questions about the course or customized, institution-specific classes, contact Nancy Ruschman, CNS project manager, at nruschma@indiana.edu.

About the Cyberinfrastructure for Network Science Center (CNS)

CNS is a research center at IU's Luddy School of Informatics and Computing in Bloomington, Indiana. For nearly 20 years, CNS has played a leading role in the field of data visualization, developing open source tools for the creation of data visualizations, offering a Massive Open Online Course in Information Visualization, co-organizing international workshops and conferences, and promoting network science and visualization through international initiatives. CNS's research, teaching, and software development efforts benefit from long-term collaborations with colleagues in academia, government, and industry.

About the IU Office of Business Partnerships

The IU Office of Business Partnerships is the front door for industry partners seeking to cultivate strategic relationships with IU faculty, researchers, and students. Collaborating with industry leaders and entrepreneurs around the world, we build meaningful, sustainable, and mutually beneficial partnerships in support of education and research across Indiana and beyond.