

CTG Online News

Thu 25 Feb 2016 17:00:00 EST

UAlbany Experts Exploring Data Driven Solutions to Country's Problems

Working in conjunction with Columbia University and other institutions across the northeast, researchers at the University at Albany are part of a National Science Foundation funded project to help explore data driven solutions to problems our country is facing in health care, energy, finance, urbanization, education and more.

Massive, complex datasets are changing the ways governments, organizations, and citizens operate. Perhaps more important is the idea that data analysis has massive potential to improve the way we live by, for example, delivering individually customized solutions to improve patient treatment, improving teaching methods in schools, reducing energy costs in buildings, and more. In March of 2012, the U.S. federal government announced the National Big Data Research and Development Initiative, which aims to solve some of the nation's most pressing research and development challenges that result from pulling information from such large, complex collections of digital data, also known as Big Data (nsf.gov). To help address the challenges associated with Big Data, the Administration began encouraging institutions to participate in Big Data research and innovation, and the NSF set a goal to establish a network of four Big Data Regional Innovation Hubs (BD Hubs) throughout the country.

The Northeast Big Data Hub, based at Columbia University, was awarded \$1.25 million dollars from NSF to bring together experts in various disciplines to facilitate the sharing of knowledge, data and tools to address different aspects of "Big Data" in areas of particular interest in the northeast region of the U.S. including finance, health, government and higher education. UAlbany's Center for Technology in Government Director Dr. Theresa Pardo participated in the development of the Northeast Hub Proposal and engaged a cohort of UAlbany experts to lead and participate in the working groups of the Hub.

Some of the questions the Northeast BD Hub expects to address are:

- How do we encourage data sharing to maximize the potential for discovery?
- How can open data principles be balanced against privacy and security concerns?
- How can cities mine and share data to improve public services and adapt to climate change?
- How can patient and environmental data be used to prevent and treat disease?

As a major research university, UAlbany is poised to bring an extensive range of Data Science expertise and assets to the Northeast BD Hub. These strengths are evident in UAlbany's exemplary academic and research programs spanning the university. UAlbany's nine colleges and schools have programs in computer science, informatics, information studies, information technology management, atmospheric and environmental science, digital forensics, mathematics (which recently established joint program in data analytics), among others. It is these collective and unique strengths of UAlbany that will be used to help deliver on the mission of the Northeast BD Hub.

UAlbany faculty involved in the Northeast Big Data Hub include:

- Theresa A. Pardo, CTG/Informatics/Public Administration & Policy, serves as a member of the Steering Committee, as a member of the Data Sharing Task Group and will lead a future Task Group on Policy Informatics.
- Robert Bangert-Drowns, Educational Theory & Practice, serves on both the Education and Big Data in Applications in Education Task Groups.
- George Berg, Computer Science, serves on the Education Task Group.
- Mei Chen, Computer Engineering, serves on the Discovery Science and Engineering Task Group and will lead a future Task Group addressing topics in computer vision and related fields.
- Tim Gage, Anthropology, serves on the Health Task Group.
- Sanjay Goel, Information Technology Management, serves on the Education and Privacy and Security Task Groups and will lead a future Task Group on Digital Forensics.

- Everette Joseph, Atmospheric Sciences Research Center, serves on the Energy, Data Sharing, and Discovery Science and Engineering Task Groups, and will lead a future Task Group entitled Air Quality, Water, Weather Extremes and Climate.
- Richard Perez, Atmospheric Sciences Research Center, serves on the Energy Task Group.
- Eliot Rich, Information Technology Management, serves on the Discovery Science and Engineering Task Group and will organize a workshop that links Big Data and Simulation Science for Policy and Strategy.
- Peter J. Shea, Educational Theory & Practice, serves on the Education and Big Data in Applications in Education Task Groups.
- Tomek Strzalkowski, Computer Science, serves on the Discovery Science and Engineering Task Group and will lead a future Task Group entitled Social Media: Big Conversations.

For more information regarding the Northeast BD Hub, follow this link.