

Overview

- STEM education research and STEM education
- Education research using data science and cyber infrastructure
- Education for data science and cyber careers
- Broadening participation in STEM, data science, and cyber



Research programs

- Education and Human Resources Core Research (ECR)
- Cross-directorate
 - BIGDATA, Cyberinfrastructure for Sustained Scientific Innovation (CSSI)
 - address the use of large data sets and/or learning analytics software to create actionable knowledge for improving STEM teaching and learning environments
 - Smart and Connected Communities



Education for data science and cyber careers

- Innovative Technology Experiences for Students and Teachers (ITEST)
 - Bessie Coleman project (Wyoming). Grades 4-8 learn about complex systems in aviation through coding, game design, and flight simulation.
- Advanced Technological Education (ATE)
 - Honolulu Community College creating hub for training data analytics technicians, including internship opportunities and Data Analytics Certificate of Achievement program
- NSF Research Traineeship (NRT)
 - Clemson (SC) developing a graduate program on risk assessment for natural/man-made disasters, based on data science and analysis of infrastructure



Education for data science and cyber careers

- Accelerating Discovery: Educating the Future STEM Workforce (AD)
 - Developing new education programs related to any Big Idea including Harnessing the Data Revolution--undergraduate and graduate level
- CyberCorps Scholarship for Service
 - Funding for scholarships in cybersecurity with service commitment afterwards
- National Academies report (2018)
 - Data Science for Undergraduates: Opportunities and Options



Thank you!

