

Postdoctoral Researcher Positions in Visual Analytics and Explainable/ Trustable / Scientific AI The University of Oklahoma, Norman, OK

We invite applications for one or two postdoctoral researcher positions with Spring 2022 start dates in visual analytics, visualization, trustable AI, social media analytics, and big data analytics.

The successful candidate will perform duties including:

- Research in visual analytics in application domains including social media analysis, interactive and explainable AI, sustainable food-energy-water systems, precision medicine, public health public safety, advanced manufacturing, crisis management, green energy systems, social justice, and advanced manufacturing.
- Research in explainable, trustable and scientific AI
- Assist in drafting successful research grant proposals.
- Lead research activities within the group, including project management and stakeholder engagement.
- Assist in supervising graduate and undergraduate students.
- Interface with renowned academic research groups at and beyond OU.

Requirements

The candidate should hold a Ph.D. in Computer Science, Information Science, Industrial Engineering, Geography, Statistics, Cognitive Psychology, or a related field, with a strong research background and expertise some of these areas:

- Visual analytics
- Geospatial and temporal analysis
- Statistics
- Machine learning
- Cognitive science
- Human-computer interaction
- AI and machine learning
- Human factors / human-computer teaming
- Computer graphics
- Digital humanities
- Food-water-energy systems

Both beginning and senior postdoctoral candidates are encouraged to apply. Excellent oral and written communication skills are mandatory.

About Us

We are the OU Data Science Institute for Societal Challenges (DISC Center). The DISC Center is a new campus-wide institute in VPRP office. Our mission is to empower transdisciplinary research and collaboration to drive convergent solutions to societal challenges in Oklahoma, the nation, and the world through data science research, tools and capabilities.

The Data Institute for Societal Challenges convenes diverse teams to collaborate to solve some of the world's most pressing problems and achieve a lasting societal impact. These communities of practice include:

- Foundational Data Science Community of Practice
- Aerospace, Defense and Global Security Community of Practice
- Community and Societal Transformation Community of Practice
- The Future of Health Community of Practice
- Environment, Energy, and Sustainability Community of Practice
- Digital Humanities Community of Practice
- The Opioid Research Community of Practice
- The Community Engagement Community of Practice

DISC works closely with local and international collaborators including social media experts, sustainability experts, agricultural producers, medical, health and public safety departments, economists, first

responders, computational scientists, businesses, and researchers in science, engineering, and economics.

Some of the projects DISC is currently engaged with include:

- ***AI Institute: Planning: A Gap-Based Approach to Frame and Develop Robust AI for Sustainable Agriculture***
This project aims to build stakeholder trust in the power of artificial intelligence to create congruency and efficiency in predicting Climate, Food, and Water processes by leveraging the foundation of the physical and biological processes underlying the data and their model representations.
- ***UNSA/OU Alianza Institute: Public Health Monitoring and Decision Making***
This pilot project will evaluate the feasibility of a real-time, electronic, syndromic surveillance and decision-making system to provide (i) base data needed for accurate situational surveillance, virus spread status, and measurement of mitigation actions, and (ii) support for timely, data-, model-, and expertise-driven problem solving
- ***Social Media Analytics and Reporting Toolkit (SMART)***
The Social Media Analytics and Reporting Toolkit (SMART) provides interactive exploration and analysis of real-time, publicly available Twitter and Instagram data through scalable integrated topic modeling algorithms, spatial cluster visualizations, exclusion and inclusion of semantic keyword filters, and temporal views
- ***NATO- netwoRk for aErting And managing publiC safeTy and resilience – REACT***
This North Atlantic Treaty Organization (NATO) project will develop an innovative pilot platform (REACT) for the rapid and effective management of scenarios immediately following a terrorist attack with chemical and biological (CB) agents as well as to control the diffusion of contamination over the space and time at short to-long term
- ***Visual Analytics for Public Health Applications***
The ongoing and evolving COVID-19 pandemic has resulted in tremendous negative effects on people's daily lives. It is critical for decision makers such as health care officials and governors to foresee potential impacts and make timely decisions. To aid in this process, we are developing PanViz 2.0, a visual analytics application that combines epidemic model and AI-driven analytics to infer the best-fit parameters to enable the adaptation to ongoing pandemics at multiple spatial aggregations (national wide, state level, and county level).

To apply

Please send your CV and a one page research statement to Dr. David Ebert (ebert@ou.edu) and Yessenia Torres (jjimenezy2@ou.edu). Applications will be reviewed on a rolling basis until the positions are filled.

Equal Employment Opportunity Statement:

The University of Oklahoma, in compliance with all applicable federal and state laws and regulations does not discriminate on the basis of race, color, national origin, sex, sexual orientation, genetic information, gender identity, gender expression, age, religion, disability, political beliefs, or status as a veteran in any of its policies, practices, or procedures. This includes, but is not limited to: admissions, employment, financial aid, housing, services in educational programs or activities, or health care services that the University operates or provides.