<p style="text-align:center">**PREP Research Associate**</p>

This position is part of the National Institute of Standards and Technology (NIST) Professional Research Experience Program (PREP). NIST recognizes that its research staff may wish to collaborate with researchers at academic institutions on specific projects of mutual interest, thus requires that such institutions must be the recipient of a PREP award. The PREP program requires staff from a wide range of backgrounds to work on scientific research in many areas. Employees in this position will perform technical work that underpins the scientific research of the collaboration.

Research Title:
Artificial Intelligence Data Researcher

The work will entail:
The applicant that is selected for this position will be part of a team of engineers and researchers conducting research and development (R&D) activities focused on accelerating the development of artificial intelligence communications solutions for first responders.

Key responsibilities will include but are not limited to:
- Research and document public safety AI communications solutions and the datasets that are used to train and test them
- Research, evaluate, and document available AI tools and applications that are the best fit for public safety AI communications solutions
- Document the AI dataset curation process and determine the best target public safety datasets and the dataset enhancement options
- Investigate AI standards organizations and applicability to public safety AI communications solutions and the datasets, and identify opportunities for participation
- Participate in public safety artificial intelligence working groups, standards meetings, and public safety collaborators and curate shared information from collaborators on their use/witness of AI for public safety communications use cases, challenges, and technological gaps
- Evaluate future public safety artificial intelligence use cases and what datasets could be used to train and test them, as well as identifying technology challenges and gaps to address
- Assist with designing and hosting a Public Safety AI Workshop to gather feedback on future public safety artificial intelligence use cases and what datasets could be used to train and test them
- Inform a public safety AI enhancement roadmap

<u>Qualifications</u>
- A Bachelor's degree in Computer Science, Artificial Intelligence, Data Science, or a related field
- Experience with modern AI tools and applications (AWS, GCP, Azure, MLFlow, SQL, BigQuery, Snowflake)
- Knowledge of data structures, formats, and AI data curation processes,
- Experience with identifying data needs for AI uses cases, and evaluating dataset quality and representativeness
- Knowledge of software engineering for AI applications
- Knowledge of mathematical probability and statistics and optimization methods
- Knowledge of machine learning including supervised and unsupervised learning, deep learning, and model evaluation
- Knowledge of dataset biases, and labeling issues
- Knowledge of AI model building
- Knowledge of translating operational needs into solvable AI problems
- US Citizens Preferred

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Privacy Act Statement

Authority: 15 U.S.C. § 278g-1(e)(1) and (e)(3) and 15 U.S.C. § 272(b) and (c)

Purpose: The National Institute for Standards and Technology (NIST) hosts the Professional Research Experience Program (PREP) which is designed to provide valuable laboratory experience and financial assistance to undergraduates, post-bachelor's degree holders, graduate students, master's degree holders, postdocs, and faculty.

PREP is a 5-year cooperative agreement between NIST laboratories and participating PREP Universities to establish a collaborative research relationship between NIST and U.S. institutions of higher education in the following disciplines including (but may not be limited to) biochemistry, biological sciences, chemistry, computer science, engineering, electronics, materials science, mathematics, nanoscale science, neutron science, physical science, physics, and statistics. This collection of information is needed to facilitate administrative functions of the PREP Program.

Routine Uses: NIST will use the information collected to perform the requisite reviews of the applications to determine eligibility, and to meet programmatic requirements. Disclosure of this information is also subject to all the published routine uses as identified in the Privacy Act System of Records Notices: NIST-1: NIST Associates.

Disclosure: Furnishing this information is voluntary. When you submit the form, you are indicating your voluntary consent for NIST to use of the information you submit for the purpose stated.