PREP Research Associate

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 want to collaborate with researchers at academic institutions on specific projects of mutual interest and, therefore, requires those institutions to be recipients of a PREP award. The PREP program involves staff from a wide range of backgrounds conducting scientific research across various fields. Individuals in this position will perform technical work supporting the collaboration's scientific research.

Research Title:
Statistical Methodology for AI Survey Response Detection and Analysis

The work will entail:
This project involves collaborative research working closely with NIST statisticians and social scientists to advance statistical survey methodology to address challenges presented by the widespread use of generative AI. The research will focus on methods for the detection of AI responses in online surveys and the analysis of survey data when such responses are suspected. The primary goals will include conducting simulation studies to assess the impact of AI responses, developing a robust theoretical framework for incorporating detection uncertainties directly into data analysis, and developing comprehensive guidance on best practices for survey practitioners at NIST.

U.S. Citizen Preferred

Key responsibilities will include but are not limited to:

- Work with scientific collaborators to help define and clarify project goals and timelines.
- Conduct a systematic literature review of the state of the art in AI survey response detection.
- Use statistical modelling and simulation studies to quantify the impact of AI responses on survey findings.
- Implement statistical methods via a high-level programming language such as R or Python.
- Present and communicate of results and statistical analysis to non-statisticians.

Qualifications

- Bachelor's degree in statistics or a related quantitative field.
- Experience with data analysis and statistical simulation.
- Proficiency in at least one of R or Python.
- Strong oral and written communication skills.

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.