Opportunity Title: Toxicity Data Scientist at EPA
Opportunity Reference Code: EPA-NSSC-0009-39-9-18-24

Organization	U.S. Environmental Protection Agency (EPA)
Reference Code	EPA-NSSC-0009-39-9-18-24
How to Apply	Click HERE to apply
Description	The EPA National Student Services Contract has an immediate opening for a full time Toxicity Data Scientist position with the Office of Research and Development at the EPA facility in Research Triangle Park, NC.

The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

What the EPA project is about

The Center for Computational Toxicology and Exposure (CCTE) supports ORD by providing solutions-driven research to rapidly evaluate the potential human health and environmental risks due to exposures to environmental stressors and ensure the integrity of the freshwater environment and its capacity to support human well-being. CCTE researchers are developing and applying cutting edge innovations in methods to rapidly evaluate chemical toxicity, transport, and exposure to people and environments. Within CCTE, the Scientific Computing & Data Curation Division (SCDCD) develops the knowledge and information architecture necessary for integrating, transforming, and managing large scale data streams related to assessing the risk of chemicals. SCDCD creates and manages online tools and ensures they are compatible with existing chemistry, toxicology, and other experimental data sources.

What experience and skills will you gain?

As a team member, you will support research efforts developing new computational tools and providing quantitative analysis for improving environmental risk assessments and regulatory decisions under the Chemical Safety for Sustainability (CSS) research program. This work is crucial to promote the development of new approach methodologies (NAMs) and data interoperability to ultimately achieve reductions in animal testing. You will support database curation and quality evaluation efforts for *in vitro* chemical screening data in the Toxicity Forecaster (ToxCast) program and legacy *in vivo* animal study extractions in the Toxicity Reference Database (ToxRefDB).

The team member will integrate their knowledge of biology with data science and join our multi-disciplinary team of scientists at the EPA. The team member will primarily provide data management, analysis, and annotation support for the ToxCast program. The ToxCast program has complied *in vitro* chemical screening data for thousands of chemicals from hundreds of biochemical and cell-based assay technology platforms covering diverse biological endpoints using the ToxCast pipeline (*tcpl*) R

package. Tasks under this position may include data wrangling heterogenous source formats into standard templates for processing; data analysis; data curation using controlled vocabularies; database scripting; code library and file management; identification and correction of bugs as part of quality control activities; user acceptance testing; and application of innovative data science solutions.

How you will apply your skills

- Contributing to design and implementation of reusable and scalable techniques for data management

- Organizing or transforming data in databases to support scientific analyses

- Analysis of data quality according to specified criteria

- Writing scripts in R to support data migration and data curation software tools

Communications-related responsibilities:

- Contribute to an interdisciplinary team of developers and scientists

- Create data visualizations to communicate results to stakeholders

- Thoroughly document all work as directed by EPA mentor to comply with EPA quality assurance procedures for transparency and reproducibility of work

- Draft reports describing complex datasets or data manipulation procedures

- Present work in internal reports/memos to be used by EPA scientists

- May have the opportunity to present work at scientific conferences or contribute to scientific manuscripts

Required Knowledge, Skills, Work Experience, and Education

- Strong reading comprehension skills and experience logically interpreting pieces of information from a variety of data source types;

- Domain knowledge of biology or toxicology processes; and

- Experience programming in the R language.

Desired Knowledge, Skills, Work Experience, and Education

- Experience with relational databases, such as MySQL or others.

Location: This job will be located EPA's facility in Research Triangle Park, NC.

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of $32.01 for hours worked.

Hours: Full-time.

Travel: Travel related to the position is not anticipated. Travel for training and presentations at national meetings may be possible.

Expected start date: The position is full time and expected to begin in October 2024. The selected applicant will become a temporary employee of ORAU working as a contractor to EPA.

For more information, contact EPANSSC@orau.org. *Do not contact EPA directly.*

Qualifications
- Be at least 18 years of age **and**
- Have earned at least a Masters' degree in biology, chemistry, toxicology, statistics, mathematics, or a related field, including training or coursework in statistics or computer programming from an accredited university or college within the last 24 months **and**
- Be a citizen of the United States of America or a Legal Permanent Resident

EPA ORD employees, their spouses, and children are not eligible to participate in this program.

Eligibility Requirements
- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree received within the last 24 month(s).
- **Discipline(s):**
  - **Life Health and Medical Sciences** (48 👁)
  - **Mathematics and Statistics** (11 👁)

Affirmation
I certify that I am at least 18 years of age; a recent graduate with at least a Masters' degree in biology, chemistry, toxicology, statistics, mathematics, or a related field, including training or coursework in statistics or computer programming from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.