Opportunity Title: Scientific Software Development Support
Opportunity Reference Code: EPA-NSSC-0009-52

Organization	U.S. Environmental Protection Agency (EPA)
Reference Code	EPA-NSSC-0009-52
How to Apply	Click HERE to apply!

Description

The EPA National Student Services Contract has an immediate opening for a full-time Scientific Software Development Support 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.

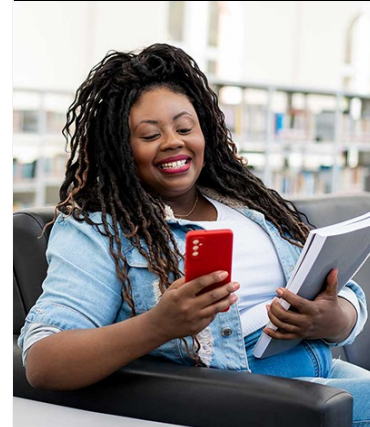**What experience and skills will you gain?**

As a team member, you will support research within CCTE for development and maintenance of applications using the R statistical programming language including analytical pipelines for CCTE's high-throughput phenotypic profiling (HTPP) and high-throughput transcriptomics (HTTr) Tier 1 screening efforts. This includes development and refinement of R source code, improved documentation, and formatting functional code to meet standards of R packages. Alongside active development of the HTPP and HTTr pipelines, the team member will also perform initial processing and analysis of various experimental datasets through these pipelines as required by the EPA mentor and EPA scientists. The team member may also support database integration efforts as part of the development process and the application of data science and machine learning techniques.

How you will apply your skills

- Work with EPA scientists and product owners in the development of R-based source code for the HTPP and HTTr pipelines;

- Write scripts in R to support increased functionality and parallel capabilities for existing pipelines;
- Create unit tests for various steps within the existing pipelines;
- Where applicable, create code that conforms to the formatting and documentation standards for R packages;
- Support analysis of existing and new HTPP and HTTr datasets;
- Monitor HTPP and HTTr data quality according to specified criteria;
- Utilize and monitor code repositories through BitBucket/GitHub; and
- Perform user acceptance testing for software updates and/or new features.

Communications-related responsibilities will include:

- Contribute to an interdisciplinary team of developers and scientists;
- Communicate with the HTPP and HTTr development team on existing issues or questions as directed by EPA mentor;
- Create data visualizations to communicate results to product owners and stakeholders;
- Thoroughly document all work as directed by EPA mentor to comply with EPA quality assurance procedures for transparency and reproducibility of work;
- Draft standard operating procedure and/or user manual documents;
- Present work in internal reports/memorandums to be used by EPA technical staff; and
- 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;
- Strong experience programming in R and related data analysis tools;
- Experience in creating and maintaining R packages; and
- Experience working with data repositories and version control systems such as GitHub/BitBucket.

Desired Knowledge, Skills, Work Experience, and Education

- Experience with databases such as MongoDB or other technologies.

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 $31.38 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 May 2023. The selected applicant will become a temporary employee of ORAU

working as a contractor to EPA. The contract renews each May through 2025.

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 computer science, bioinformatics, statistics, mathematics, or a related field, including training or coursework in 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).
	- **Overall GPA:** 2.00
	- **Discipline(s):**
	    - **Business** (11 👁)
	    - **Chemistry and Materials Sciences** (12 👁)
	    - **Communications and Graphics Design** (6 👁)
	    - **Computer, Information, and Data Sciences** (17 👁)
	    - **Earth and Geosciences** (21 👁)
	    - **Engineering** (27 👁)
	    - **Environmental and Marine Sciences** (14 👁)
	    - **Life Health and Medical Sciences** (48 👁)
	    - **Mathematics and Statistics** (11 👁)
	    - **Other Non-Science & Engineering** (13 👁)
	    - **Physics** (16 👁)
	    - **Science & Engineering-related** (2 👁)
	    - **Social and Behavioral Sciences** (29 👁)

Affirmation	I certify that I am at least 18 years of age; a recent graduate with at least a Masters' degree in computer science, bioinformatics, statistics, mathematics, or a related field, including training or coursework in 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.