

Opportunity Title: Scientific Web Application Developer

Opportunity Reference Code: EPA-NSSC-0006-29

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-NSSC-0006-29

How to Apply Click [HERE](#) to apply.

Description The EPA National Student Services Contract has an immediate opening for a full time Scientific Web Application Developer position with the Office of Research and Development at the EPA facility in Washington, D.C.

The Office of Research and Development at the EPA is a leader in the science of human health and ecological risk assessment, a process used to determine how pollutants or other stressors may impact human health and the environment.

What the EPA project is about

ORD addresses the needs of stakeholders by preparing technical reports and assessments that integrate and evaluate the most up-to-date research. These products serve as a major component of the scientific foundation supporting EPA's regulations and policies. ORD also conducts cutting-edge research to develop innovative quantitative risk assessment methods and tools that help extrapolate between experimental data and real-world scenarios, improve our understanding of uncertainties, and facilitate careful weighing of evidence using approaches such as systematic review.

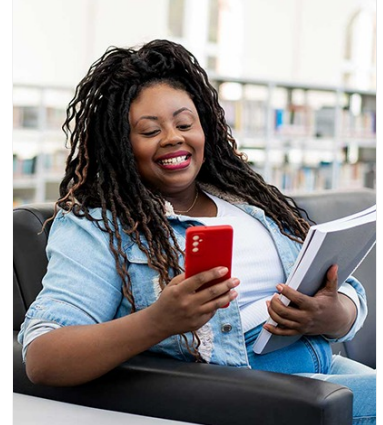
ORD produces and maintains a series of documents and information that are used to inform regulatory programs. These documents are collectively known as assessment products: Integrated Science Assessments (ISAs), Provisional Peer-Reviewed Toxicity Values (PPRTVs), and Integrated Risk Information System (IRIS). Both commercial and EPA-managed software are used in the production and maintenance of assessment products. EPA-managed software includes the Health and Environmental Research Online (HERO) database and the Health Assessment Workspace Collaborative (HAWC). HERO includes more than 2 million scientific references and data from the peer-reviewed literature, and HAWC is an open-source web-application used by scientists at EPA for extracting and visualizing data extracted from scientific literature to summarize evidence and key findings. ORD also routinely investigates opportunities to automate processes in the production and maintenance of assessment products including automation of technical editing or rapid prototyping of potential features for HERO and/or HAWC. Assessment products supported by HERO, HAWC, and the wider collection of software, tools, and databases characterize the nature and magnitude of health risks to humans and the ecosystem from pollutants and chemicals in the environment. ORD tools also support development of technical products in other EPA Program Offices and Regions (e.g., OCSPP).

What experience and skills will you gain?

As a team member, you will provide software development, data analysis, and data visualization support to the EPA-managed software, tools, and



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databases supporting assessment products including HERO and HAWC projects. The team member will work with HERO and HAWC development teams and will be trained to support various activities in the production and maintenance of assessment products.

Software development includes but is not limited to:

- Writing front-end web-application in JavaScript to dynamically display information;
- Writing web-based application software, including designing server systems capable of querying a database of findings and summarizing findings in various formats, including but not limited to designing REST Application Programming Interfaces (APIs) in Python;
- Using/modifying a database including querying large data tables or designing new schemas; and
- Designing unit-tests to ensure the software works as expected.

Data analysis includes but is not limited to:

- Reviewing database exports or other external API systems to determine how existing data can be utilized with web-applications;
- Extraction, transformation, and loading (ETL) of data including creating data pipelines to reformat and analyze existing data; and
- Working with staff scientists to adapt analysis-specific scientific code to more generalizable solutions.

Data visualization includes but is not limited to:

- Creating prototypical data visualizations using new or existing datasets;
- Building interactive visualization which allow scientists to explore datasets in novel ways; and
- Using software-development skills and expertise to translate prototypical charts and visuals into visuals in a production environment.

Required Knowledge, Skills, Work Experience, and Education

- Demonstrated training and experience in computational skills;
- Proficiency in programming, including proficiency in one or more of the following languages: JavaScript, Python, R, Java, or SQL;
- A working knowledge of relational databases;
- Experience with software version control (Git);
- Experience with scientific data in at least one of the following fields or closely related fields: ecology, toxicology, environmental science, and epidemiology;
- Strong written, oral, and electronic communication skills; and
- Experience working well independently and as a part of a team.

Location: This job will be located EPA's facility in Washington, D.C.

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of \$24.20 for hours worked.

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Hours: Full-time.

Travel: No travel will be required.

Expected start date: The position is full time and expected to begin March 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 Bachelor's degree in a basic or applied science (e.g., computer science, information science, bioinformatics) 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:** Bachelor's Degree received within the last 24 month(s).
 - **Overall GPA:** 2.00
 - **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([17](#)👁)

Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a Bachelor's degree in a basic or applied science (e.g., computer science, information science, bioinformatics) 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.

ORAU is an Equal Opportunity Employer (**EOE AA M/F/Vet/Disability**); visit the [ORAU website](#) for required employment notices.