

**Opportunity Title:** Part-Time Data Scientist

**Opportunity Reference Code:** EPA-NSSC-0009-54

**Organization** U.S. Environmental Protection Agency (EPA)

**Reference Code** EPA-NSSC-0009-54

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

**Description** The EPA National Student Services Contract has an immediate opening for a part-time 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 EPA Center for Computational Toxicology and Exposure (CCTE) is responsible for developing new computational tools and providing quantitative analysis for improving public health and environmental risk assessments and regulatory decisions pertaining to chemical safety. CCTE researchers integrate advances in biology, biotechnology, chemistry, and computer science to identify important biological processes that may be disrupted by the chemicals. The combined information helps prioritize chemicals based on potential human health risks. Using computational toxicology research, thousands of chemicals can be evaluated for potential risk at small cost in a very short amount of time.

EPA is responsible for ensuring the safety of thousands of chemicals but quantitative exposure data are available for only a small fraction of registered chemicals. As part of its ongoing efforts to support implementation of the Toxic Substance Act as revised by the Frank R. Lautenberg Chemical Safety for the 21st Century Act, EPA researchers are developing innovative methods to make exposure estimates for thousands of chemicals. These type of exposure data are combined with toxicity data to help thoroughly evaluate chemicals for potential health effects (<https://www.epa.gov/chemical-research/rapid-chemical-exposure-and-dose-research>).

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

As a team member, you will provide data management, data curation and data analysis support for EPA's HHTK and ExpoCast project. This project focuses on analyzing a database of in vitro toxicokinetic data, application of machine learning techniques (e.g., Random Forest) to generate predictive models, and the creation of R packages to package and distribute the R code and data for re-use by others. Toxicokinetics describes the absorption, distribution, metabolism, and excretion of chemicals by the body. Toxicokinetic information is needed to understand the risks posed by chemicals in the environment to the public health. The team member will be a member of a multi-disciplinary research team and support the



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development, maintenance, and analysis of EPA's HHTK and ExpoCast projects.

**Data Development and Analysis responsibilities will include:**

- Implementation of machine learning techniques using caret (R) or and/or Sci-Kit learn (Python);
- Preparation and quality control of data and workflows;
- Creation of metadata and fact sheets supporting the data products; and
- Literature review.

**Communications-related responsibilities will include:**

- Participating as a member of a multi-disciplinary research team;
- Interacting with other members of the development team as well as EPA scientists; and
- Documenting code via Bitbucket and GitHub.

**Required Knowledge, Skills, Work Experience, and Education**

- Strong written, oral, and electronic communication skills;
- Experience programming in R or Python; and
- Experience in machine learning.

**Desired Knowledge, Skills, Work Experience, and Education**

- Experience in chemical informatics and
- Experience documenting code via Bitbucket and/or Github.

**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 \$28.52 for hours worked.

**Hours:** Part-time.

**Travel:** Travel will not be required.

**Expected start date:** The position is part 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](mailto: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 the fields of environmental science, chemistry, applied mathematics, computer science or a related field plus one year of graduate school 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.

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

- Eligibility Requirements**
- **Citizenship:** LPR or U.S. Citizen
  - **Degree:** Any degree .
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** ([12](#) )
    - **Computer, Information, and Data Sciences** ([1](#) )
    - **Environmental and Marine Sciences** ([14](#) )
    - **Mathematics and Statistics** ([11](#) )

**Affirmation** I certify that I am at least 18 years of age; a recent graduate with at least a bachelor's degree in the fields of environmental science, chemistry, applied mathematics, computer science or a related field plus one year of graduate school 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.

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