

**Opportunity Title:** Physicochemical Data Scientist  
**Opportunity Reference Code:** EPA-NSSC-0009-24-10-26-23

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

**Reference Code** EPA-NSSC-0009-24-10-26-23

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

**Description** The EPA National Student Services Contract has two immediate openings for a full time Physicochemical Data Scientists 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 Chemical Characterization and Exposure Division (CCED) performs research to develop and advance analytical chemistry, computational chemistry, and cheminformatic approaches that are critical to the rapid characterization of the presence, structural characteristics, and properties of chemicals that underlie chemical exposure, environmental fate, toxicokinetics and toxicity.

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

As team members, you will both support research under the Chemical Safety for Sustainability (CSS) research program on PFAS (Per- and Polyfluoroalkyl Substances). PFAS are a group of man-made chemicals that are very persistent in the environment and in the human body – meaning they don't break down and they can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects. Physicochemical (or physchem) properties are needed to be able to assess human exposure to these chemicals.

#### General Responsibilities

- Collecting, curating, and organizing data in databases on physchem properties including relevant metadata (e.g., CAS number, chemical name, temperature, pressure);
- Responding to data requests from colleagues as needed (e.g. retrieve data according to specified criteria) through development of programming scripts or SQL queries; and
- Developing novel models and text analytics methods for identifying data sources with physchem data.



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**Communications-related responsibilities**

- Participating as members of a multi-disciplinary research team;
- Interacting with other members of the development team as well as EPA scientists;
- Documenting all work as directed by EPA mentor to comply with EPA quality assurance procedures for transparency and reproducibility of work; and
- Summarizing work in internal reports/memos to be used by EPA scientists.

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

- Experience programming in the Java, R, or Python languages;
- Experience with quantitative techniques, basic statistics, and use of spreadsheets; and
- Strong reading comprehension skills and experience logically interpreting pieces of data.

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

- Knowledge of basic chemistry in terms of molecular structure and physicochemical properties;
- Master's coursework in statistics, data science, user experience and design, and data analysis;
- Experience with computational or mathematical modeling (i.e. cheminformatics) and data science techniques; and
- Experience with databases (e.g. MySQL).

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

**Salary:** Selected applicants will become temporary employees of ORAU and will receive an hourly wage of \$31.38 for hours worked.

**Hours:** Full-time.

**Expected start date:** The position is full time and expected to begin December 2023. The selected applicants will become temporary employees of ORAU working as a contractors to EPA. The contract renews each May through 2025.

**Qualifications**








- Be at least 18 years of age **and**
- Have earned at least a Master's degree in physics, chemistry, biology, engineering, applied sciences, environmental health, exposure science, computer sciences, information technology, data science, or a related field of study 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.

**Eligibility**

- **Citizenship:** LPR or U.S. Citizen

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- Requirements**
- **Degree:** Master's Degree received within the last 24 months or currently pursuing.
  - **Overall GPA:** 2.00
  - **Discipline(s):**
    - **Business** ([1](#) )
    - **Chemistry and Materials Sciences** ([12](#) )
    - **Computer, Information, and Data Sciences** ([16](#) )
    - **Engineering** ([27](#) )
    - **Environmental and Marine Sciences** ([1](#) )
    - **Life Health and Medical Sciences** ([45](#) )
    - **Physics** ([16](#) )

**Affirmation** I certify that I am at least 18 years of age; a recent graduate with at least a Master's degree in physics, chemistry, biology, engineering, applied sciences, environmental health, exposure science, computer sciences, information technology, data science, or a related field of study 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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