Opportunity Title: Atmospheric Data Scientist
Opportunity Reference Code: EPA-NSSC-0007-95

Organization	U.S. Environmental Protection Agency (EPA)
Reference Code	EPA-NSSC-0007-95
How to Apply	Click <u>HERE</u> to apply.
Description	The EPA National Student Services Contract has an immediate opening for a full time Atmospheric 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 Environmental Measurement & Modeling (CEMM) conducts research to advance EPA's ability to measure and model contaminants in the environment, including research to provide fundamental methods and models needed to implement environmental statutes. Within CEMM, the Atmospheric & Environmental Systems Modeling Division (AESMD) conducts research to advance EPA's ability to characterize atmospheric and environmental processes that impact the transport, transformation, and fate of environmental contaminants in the air and the multimedia linkages of air pollutant emissions in support of the Clean Air Act and the Clean Water Act.

As part of their mission, AESMD supports EPA's mission to protect human health and the environment by developing, evaluating, and applying state-of-the-science modeling tools that are used to manage air quality at local, state, regional, and global scales. Models developed by AESMD estimate the contributions of various air emission sources to ambient air pollution and inform human/ecological exposure and effects assessment. The AESMD staff consists of atmospheric scientists, meteorologists, hydrologists, physical scientists, computational chemists, chemical engineers, computer scientists, and statisticians.

The Community Multiscale Air Quality Modeling (CMAQ) system (www.epa.gov/cmaq) is an active open-source development project of the U.S. EPA that consists of a suite of programs for conducting air quality model simulations across a range of spatial and temporal scales. CMAQ combines current knowledge in atmospheric science and air quality modeling, multi-processor computing techniques, and an open-source framework to deliver fast, technically sound estimates of ozone, particulates, toxics, and acid deposition. Several aspects of the software (including some of the auxiliary programs) will be improved using the student's expertise. The student shall gain experience and knowledge by assisting AESMD staff with various aspects of atmospheric model development, testing, and applications.

What experience and skills will you gain?

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As a team member, you will work under the guidance of AESMD scientists to provide scientific programming and outreach support to a large, multi-disciplinary research team.

Responsibilities will include:

- Comparing estimates from different CMAQ model simulations to measurement data. Such evaluation will include modifying and running existing R, Python or Fortran code, as well as writing and documenting new code.
- Interpreting and summarizing model evaluation results, including presenting findings to collaborators.
- Assisting with data hosting tasks, including data extractions and post-processing of existing modeling data, writing documentation, organizing data files, and responding to questions about CMAQ-related data products.
- Assisting with community outreach and user support, including updates to the public facing CMAQ webpage and GitHub repository.

Required Knowledge, Skills, Work Experience, and Education

- Experience in coding scientific software and/or computational methods;
- Experience with programming in at least two of the following, and proficiency in at least one of the following: FORTRAN, Python, and R;
- Experience working with output data sets from atmospheric or environmental models and/or geospatial data, including specific knowledge of netCDF;
- Experience with Linux;
- Experience with Git and GitHub;
- Demonstrated ability to work independently, proactively, and remotely with minimal supervision; and
- Strong written, oral, and electronic communication skills.

Desired Knowledge, Skills, Work Experience, and Education

- Experience with writing shell scripts in Linux;
- Experience with HTML and working within a web content management system; and
- Experience with regional or global atmospheric models.

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: No overnight travel will be required.

Expected start date: The position is full time and expected to begin August 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 Master's degree in atmospheric science, physical science, engineering, statistics, mathematics, computer science, or a related scientific or technological 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. *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):** **Computer, Information, and Data Sciences** (17 👁) **Earth and Geosciences** (1 👁) **Engineering** (27 👁) **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 Master's degree in atmospheric science, physical science, engineering, statistics, mathematics, computer science, or a related scientific or technological 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.