

**Opportunity Title:** GIS Ecosystems Support

**Opportunity Reference Code:** EPA-NSSC-0005-26-12-18-23

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

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

**Description** The EPA National Student Services Contract has an immediate opening for a full time GIS Ecosystems 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 Public Health and Environmental Assessment (CPHEA) provides the science needed to understand the complex interrelationship between people and nature in support of assessments and policy to protect human health and ecological integrity. Within CPHEA, the Public Health and Environmental Systems Division (PHESD) focuses on the interrelationships between people and their environment, promotes human health and well-being, and fosters healthy and safe communities.

As part of their mission, PHESD supports EPA's mission to protect human health and the environment by developing and applying innovations in exposure science. Exposure science sets the context for understanding and solving real-world problems. A major component of the organization's research portfolio is the EnviroAtlas ([www.epa.gov/enviroatlas](http://www.epa.gov/enviroatlas)). EnviroAtlas provides interactive tools and resources for exploring the benefits people receive from nature or "ecosystem goods and services". Ecosystem goods and services are critically important to human health and well-being, but they are often overlooked due to lack of information. Using EnviroAtlas, many types of users can access, view, and analyze diverse information to better understand the potential impacts of various decisions.

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

As a team member, you will provide data management, data curation and data analysis support for the EnviroAtlas project. The team member will provide database management, file management, data curation and extraction, quality control, as well as performing qualitative and quantitative data analysis. The team member will be a member of a multi-disciplinary research team and will support the development, maintenance, and analysis of EnviroAtlas data, tools, and web applications for both national and community scale ecosystem service indicators.

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

- Development of landscape maps and data layers using deep learning, convolutional neural networks and image analysis techniques;



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- Analysis of land cover maps for ecosystem services and sustainability;
- GIS (Geographic Information System) processing of data layers;
- Quality control of geospatial data;
- Creation of quality assurance documentation, 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, methods and data development efforts.

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

- Demonstrated education and/or experience in GIS (geographic information systems), geospatial data compilation and analysis;
- Experience programming in Python;
- Working knowledge of remote sensing and image processing; and
- Strong written, oral and electronic communication skills.

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

- Experience using ESRI ArcPro and ArcGIS Online and
- Experience applying machine learning, deep learning and convolutional neural networks.

**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:** Occasional overnight travel may be required.

**Expected start date:** The position is full time and expected to begin February 2024. 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 master's degree in the fields of geospatial



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science, geography, ecology, environmental science, geosciences 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.

*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):**
    - **Earth and Geosciences** ([21](#) )
    - **Environmental and Marine Sciences** ([14](#) )

**Affirmation** I certify that I am at least 18 years of age; a recent graduate with at least a master's degree in the fields of geospatial science, geography, ecology, environmental science, geosciences 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.

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