Opportunity Title: ORNL Scientific Applications Programmer Post-Master's Research Associate
Opportunity Reference Code: ORNL20-07-ESD

Organization Oak Ridge National Laboratory (ORNL)

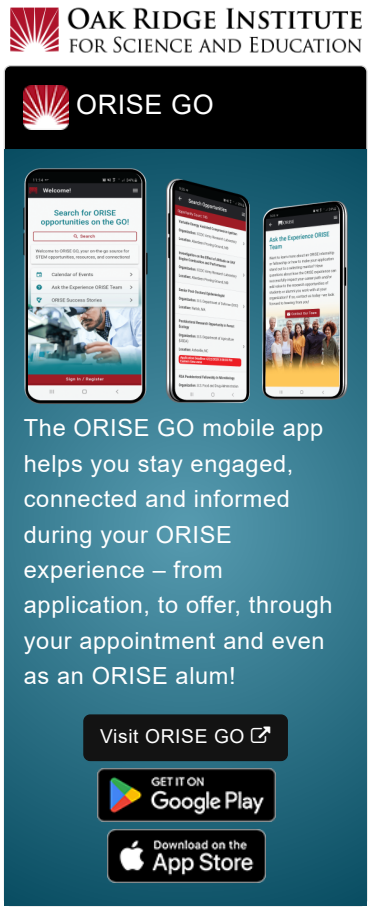
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Description Oak Ridge National Laboratory (ORNL) is the largest U.S. Department of Energy (DOE) science and energy laboratory, conducting basic and applied research to deliver transformative solutions to compelling problems in energy, environment, and security.

The Environmental Sciences Division (ESD) of ORNL is seeking a scientific programmer for its Remote Sensing and Environmental Informatics group. The candidate will join an enthusiastic team of developers, data gurus, and scientists working on the ORNL Distributed Active Archive (DAAC) for biogeochemical dynamics (https://daac.ornl.gov) to provide integrated data products, data management and delivery systems and services, and data analytics to facilitate research, education, and decision-making in the environmental sciences. The ORNL DAAC is a NASA-funded data center responsible for gathering, curating, publishing, and distributing data created and used by the NASA Terrestrial Ecology Program.

The participant will be involved in the development of software used to ingest and publish terrestrial ecology data, both using on-premises and cloud (Amazon Web Services) approaches.

The position appointment is for one year, with extension to a total of three years possible, depending on performance, mutual interest, and available funding. The anticipated start date for this position is January 2020, though candidates with later availabilities will receive full consideration. Salaries will be competitive and include benefits.



Qualifications Candidates should have completed a master's degree in computer science, engineering, physical science, mathematics, geology, geography, earth and environmental science, ecology, forestry, or related field.

Preferred Skills:

Required Qualifications

- Practical software development experience in Python.
- Practical software development experience in one or more JavaScript frameworks.
- Practical experience working on Linux systems, including shell scripting.
- Strong interpersonal skills, including experience working in a collaborative team environment.

Preferred Experience

- Experience with Python Flask.
- Experience with any cloud environment, with Amazon Web Services (AWS) and Terraform of particular interest.
- Experience working with containers, particularly Docker.
- Experience with relational databases, particularly MySQL.
- Experience or background relating to the earth and environmental

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sciences.
- Experience with NoSQL storage approaches.
- Experience with CI/CD, DevOps, Agile, Git, Kubernetes, etc..
- Experience working with scientific data, particularly any form of earth science data.
- Experience working with geospatial data and/or geospatial information systems.
- Familiarity with scientific metadata standards (such as ISO 19115, Dublin Core, or Ecological Markup Language).

Living in East Tennessee: While the opportunity to work at ORNL is an amazing experience in itself, it's easy to overlook everything else East Tennessee has to offer if you haven't had the opportunity to spend time here. From spending your weekends downtown at Knoxville's farmers market, the Rhythm n' Blooms Music Festival, or the Dogwood Arts Festival, to some of the best hiking, kayaking, and camping in the U.S., East Tennessee has something to offer everyone.

The ORNL Post-Master's Research Associate Program is administered by Oak Ridge Associated Universities through its contract with DOE to manage the Oak Ridge Institute for Science and Education (ORISE).

Eligibility Requirements

- **Degree:** Master's Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Business** (11)
  - **Chemistry and Materials Sciences** (12)
  - **Communications and Graphics Design** (6)
  - **Computer, Information, and Data Sciences** (16)
  - **Earth and Geosciences** (21)
  - **Engineering** (27)
  - **Environmental and Marine Sciences** (14)
  - **Life Health and Medical Sciences** (45)
  - **Mathematics and Statistics** (10)
  - **Other Non-Science & Engineering** (13)
  - **Physics** (16)
  - **Science & Engineering-related** (1)
  - **Social and Behavioral Sciences** (28)
- **Age:** Must be 18 years of age

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