Opportunity Title: USDA-FS Full-stack Development in Wildland Fire and Smoke Science Software Applications
Opportunity Reference Code: USDA-FS-PNWRS-2025-0048

Organization	U.S. Department of Agriculture (USDA)
Reference Code	USDA-FS-PNWRS-2025-0048
How to Apply	*To submit your application, scroll to the bottom of this opportunity and click APPLY.*

A complete application consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Click here for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations. At least one recommendation must be submitted in order for the mentor to view your application.

All documents must be in English or include an official English translation.

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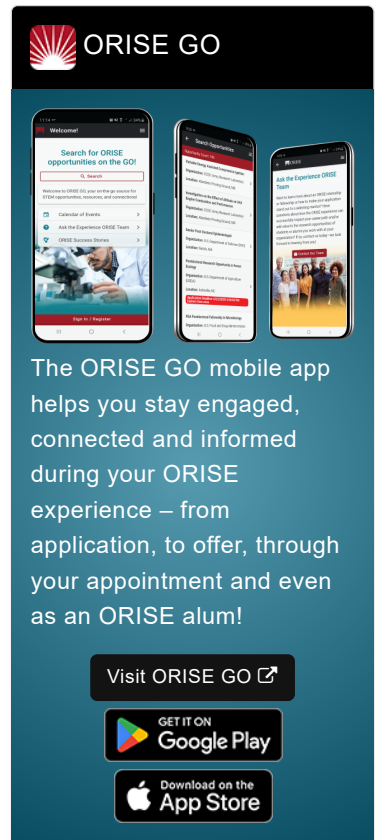| **Application Deadline**	10/3/2025 3:00:00 PM Eastern Time Zone
Description	***Applications will be reviewed on a rolling-basis.**

USDA Forest Service Office/Lab and Location: A fellowship opportunity is available with the US Department of Agriculture (USDA) Forest Service (FS) within the Pacific Northwest Research Station (PNWRS) located in Seattle, Washington. Remote participation is preferred if the applicant is not local (Seattle Area).

At the heart of the USDA Forest Service's mission is their purpose. Everything they do is intended to help sustain forests and grasslands for present and future generations. Why? Because their stewardship work supports nature in sustaining life. This is the purpose that drives the agency's mission and motivates their work across the agency. It's been there from the agency's very beginning, and it still drives them. To advance the mission and serve their purpose, the USDA Forest Service balances the short and long-term needs of people and nature by: working in collaboration with communities and our partners; providing access to resources and experiences that promote economic, ecological, and social vitality; connecting people to the land and one another; and delivering world-class science, technology and land management.

Research Project: This is an opportunity to participate in wildfire and smoke emissions research conducted by the Pacific Wildland Fire Sciences Laboratory, a collaboration between the University of Washington's School of Environmental and Forest Sciences (SEFS) and the US Forest Services

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Pacific Northwest Research Station's AirFire Program. The participant will interact with a multidisciplinary team of university faculty, research staff, graduate students, and scientists with expertise on fire weather, climatology, air quality, statistics, and computer engineering. Land managers, air quality and health agencies, and the public use our research products, tools, information and expertise to address issues concerning smoke, prescribed and wildland fire and air quality.

This is an exceptional opportunity for the participant to advance in a variety of programming skills while developing websites and User Interfaces (UI) that will be used to support wildfire incident command teams. It will also provide occasions to engage with a wide user community involved in wildland fire and smoke.

Learning Objectives: The participant will have the opportunity to *practice and improve skills in*:

- Developing and maintaining modern, performant websites that host an assortment of data.
- Creating User Interfaces based on mockups.
- Processing and incorporating data from a variety of sources and formats.
- Creating and debugging backend software processes.
- Python, Javascript, HTML, CSS, PostgreSQL, MongoDB, and other technologies.
- Using data processing systems and operational sites.
- Data management, including collecting, cleaning, organizing, and maintaining datasets.

Mentor: The mentor for this opportunity is Sim Larkin (sim.larkin@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: June 2025. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year but may be extended upon recommendation of USDA Forest Service and is contingent on the availability of funds.

Level of Participation: The appointment is full time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **The annual stipend range is** $85k to $115k, depending on experience, with $4,500 for travel and supplies.

Citizenship Requirements: This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR) only.

ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established

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through an interagency agreement between DOE and USDA Forest Service. Participants do not become employees of USDA, USDA Forest Service, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

Questions: Please visit our [Program Website](). After reading, if you have additional questions about the application process please email [ORISE.USFS.PNWRS@orau.org]() and include the reference code for this opportunity.

Qualifications

The qualified candidate should have received a bachelor's, master's, or doctoral degree in one of the relevant fields. Degree must have been received within the past five years.

Preferred skills:

- Have facility with git and basic Unix commands.
- Modern JS/HTML/CSS.
- Python coding, including object-oriented programming and object-oriented design.
- A modern JS framework (ExpressJS, Svelte, React, etc.)
- At least one server-side language (ideally Python, or a willingness to learn python.)

Other helpful skills:

- Knowledge of graphics and charting libraries (D3, Highcharts, Chart.js, etc.)
- Experience with Docker and either AWS/GCC
- Communication and interpersonal skills
- Demonstrated ability to perform collaboratively in a team environment
- Experience with Unix and Windows OS
- Use of videoconference software

Point of Contact   [Justina]()

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
- **Age:** Must be 18 years of age
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).