Opportunity Title: USFS Wildland Fire Danger Modeling Software Development Fellowship
Opportunity Reference Code: USDA-USFS-RMRS-2024-0145

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-USFS-RMRS-2024-0145

How to Apply ***Connect with ORISE...on the GO!*** Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

A complete application package 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. Selected candidate must provide proof of completion of the degree before the appointment can start. Click **Here** for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations.

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

Application Deadline 5/24/2024 3:00:00 PM Eastern Time Zone

Description ***Applications will be reviewed on a rolling-basis.**

USFS Office/Lab and Location: A fellowship opportunity is available with the US Department of Agriculture (USDA) Forest Service (USFS) within the Rocky Mountain Research Station (RMRS) located in Missoula, Montana.

At the heart of the U.S. 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 U.S. 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 project is aimed at developing software for the analysis of wildland fire potential and danger across multiple scales. This system implements multiple physically-based models of fuel moisture and fire spread into desktop analysis tools that are used by land managers to set critical decision points for wildland fire management activities across the United States. The participant would be part of a research team comprised of a variety of disciplines including ecologists, foresters, engineers, physical scientists, data scientists and contracted software developers.

Learning Objectives: The participant will learn valuable and practical

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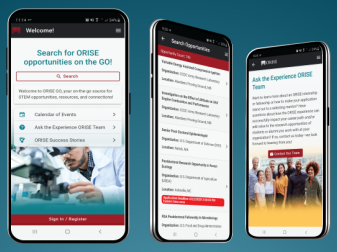
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software development skills while contributing to the improvement of these critical land management tools. The participant will learn how to use software code management systems, such as Github, to manage software development in a small team environment and they would also gain valuable experience in common programming languages such as C++ and Python. The project would also introduce the participant to common data science analytical techniques and it would explore ways to implement that functionality in C++. The project would also expose the participant to commonly-used scientific data types as well as broad overviews of key geospatial concepts. Additionally, they would gain skills in the development of robust documentation for software APIs using common open-source tools.

Mentor: The mentor for this opportunity is Matt Jolly (william.jolly@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: May 2024. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for 3 months but may be extended upon recommendation of USFS 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.

Citizenship Requirements: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the Guidelines for Non-U.S. Citizens Details page of the program website for information about the valid immigration statuses that are acceptable for program participation.

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 through an interagency agreement between DOE and USFS. Participants do not become employees of USDA, USFS, 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.RMRS@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should be currently pursuing a bachelor's degree in the one of the relevant fields.

Preferred skills:

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- The participant should have a solid background in C++ programming and software development and be willing to function as part of diverse research team.
- Familiarity with scripting languages, such as Python, would also be ideal.

Eligibility Requirements

- **Degree:** Currently pursuing a Bachelor's Degree.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (17 👁)