Opportunity Title: Geothermal Technologies Office - Machine Learning & Cybersecurity for Geothermal
Opportunity Reference Code: DOE-EERE-STP-GTO-2019-1400

Organization U.S. Department of Energy (DOE)

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How to 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. Selected candidate may be required to provide proof of completion of the degree before the appointment can start.
- A current resume/curriculum vitae (CV)
- Two academic recommendations. References are asked to describe applicant's Scientific Capabilities and Personal Characteristics and must specify how they know the applicant.

The resume/CV must include the following:

- Basic applicant Information: Name, address, phone, email, and other contact information.
- Work & Research Experience: List all work and research experiences beginning with current or most recent. Include the name of the employer, location, position held, and time period involved.
- Leadership Experience: List experiences (e.g., work, civic, volunteer, research) that demonstrate your leadership skills. Detail your role, type of experience, organization, location, and duration.
- Educational History: List all institutions from which you received or expect to receive a degree, beginning with current or most recent institution. Include the name of the academic institution, degree awarded or expected, date of awarded or expected degree, and academic discipline.
- Honors & Awards: List in chronological order (most recent first) any awards or public recognitions. Include the name of awarding institution, title of the award or honor, and date of award or honor.

If you have questions, please send an email to DOE-RPP@orise.orau.gov. Please list the reference code for this opportunity in the subject line of your email.

Description The mission of the U.S Department of Energy (DOE) is to ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions. The Energy Department has opportunities available in the Office of Energy Efficiency and Renewable Energy's (EERE) Geothermal Technologies Office (GTO). GTO researches, develops, and validates innovative and cost-competitive technologies and tools to locate, access, and develop geothermal resources in the United States.

ORISE is continuing normal program operations during the COVID-19 pandemic. This opportunity will be offered as long as the Hosting Facility is able to complete the onboarding process and ensure a meaningful

experience to participants. We encourage you to apply and submit your application as soon as possible. Updates to this opportunity will be provided on this page as needed.

Geothermal energy, a virtually untapped energy resource derived from the earth's heat, is more vital today than ever—it supplies clean, renewable power around the clock, emits little or no greenhouse gases, and takes a very small environmental footprint to develop. By developing, demonstrating, and deploying innovative technologies, GTO's efforts are helping stimulate the growth of the geothermal industry within the renewable energy sector and encouraging quick adoption of technologies by the public and private sectors.

Learn more about the Geothermal Technologies Office (GTO) by visiting our web page at https://www.energy.gov/eere/geothermal/geothermal-energy-us-department-energy .

The Geothermal Technologies Office is interested in offering an educational opportunity focused on various computer and data science initiatives including machine learning for efficient geothermal drilling, machine learning for geothermal power plant operation, machine learning for geothermal exploration, and cybersecurity needs in the geothermal industry. We would like the participant to engage in the computational aspects of the geothermal technologies program. The Participant will learn how to research and collaborate with Federal staff to understand the research being conducted on all relevant awards, ensure that communication among researchers is effective, and help bring together the machine learning aspects of the awards with cybersecurity needs. The Participant will research and analyze the current state-of-the-art in computational opportunities for the geothermal industry, and collaborate with GTO staff to better understand where the research gaps exist in these areas.

Participant Benefits

Selected participants will receive a stipend as support for their living and other expenses during this appointment. Stipend rates are determined by EERE officials and are based on the candidate’s academic and professional background. Relocation expenses, not to exceed $5,000, incurred in relocating from the participant's current address to Washington, D.C. (if more than 50 miles from the address shown on the application), may be reimbursed. Participants will receive a travel allowance of $10,000 per appointment year to cover travel-related expenses to scientific and professional development activities.

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

For more information about the EERE Science, Technology and Policy Program, please visit https://www.energy.gov/eere/education/energy-efficiency-and-renewable-energy-science-technology-and-policy-program

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Appointment Location

Golden, Colorado or Washington, DC

Nature of Appointment

The participant will not enter into an employee/employer relationship with ORISE, ORAU, DOE, or any other office or agency. Instead, the participant will be affiliated with ORISE for the administration of the appointment through the ORISE letter of appointment and Terms of Appointment.

Qualifications

Program eligibility requirements can be found at: visit https://www.energy.gov/eere/education/energy-efficiency-and-renewable-energy-science-technology-and-policy-program

Received or Currently Pursuing Masters degree or PhD in Computer Science, Data Science, Informatics, Geoscience, Geoengineering, Geophysics, or a related field;

- Minimum overall 3.0 GPA
- Interest in energy issues, particularly renewable and/or subsurface energy technologies;
- Excellent written and oral communications skills;
- Strong work ethic and attention to detail.

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree or Doctoral Degree.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (3 👁)
  - **Earth and Geosciences** (2 👁)
  - **Engineering** (8 👁)
  - **Environmental and Marine Sciences** (2 👁)
- **Age:** Must be 18 years of age