



September 11th, 2024

Intern - Geospatial data engineer

UW Climate Risk Lab - University of Washington Foster School of Business

Job Type: Part-time internship, starting October 1st, 2024

Length of term: academic year

Time commitment: 5-10 hpw

Location: UW Foster School of Business, Founders Hall (hybrid/ on-site 2 days per week)

Job Description

About the Role: The UW Climate Risk Lab is seeking a motivated and enthusiastic Geospatial Data Engineer Intern to support our groundbreaking project focused on forecasting physical climate risks to the Washington State power grid. This internship offers a unique opportunity to gain hands-on experience in using cutting-edge open-source machine learning (ML) and artificial intelligence (AI) tools to validate open-access geospatial data through optical image recognition. The successful intern will work closely with our experienced Geospatial Data Engineer, who will provide mentorship and guidance throughout the project.

Key Responsibilities:

- Assist in the collection, cleaning, and processing of geospatial data related to Washington State's power grid, including power plants, transmission and distribution lines, substations, and transmission towers.
- Use optical image recognition techniques to validate open-access geospatial data sources, ensuring data accuracy and reliability.
- Collaborate with the Geospatial Data Engineer to integrate validated data with downscaled climate model data, including weather hazard predictions.
- Contribute to the development of a digital interface that allows users to interact with and analyze geospatial data in the context of climate risk.
- Document and share your learning process, including challenges and solutions, to support the continuous improvement of the project.

Skills and Qualifications:

- Fundamental understanding of geospatial data concepts or a demonstrated interest to develop expertise in this area.
- Basic programming skills in Python, with a willingness to learn and apply open-source ML/AI tools.
- Familiarity with open-source software development practices and version control (e.g., Git) is a plus.
- Strong analytical and problem-solving skills, with attention to detail.



- Eagerness to learn and develop new skills in geospatial data engineering and climate risk assessment.
- Excellent communication skills, with the ability to document and explain technical concepts clearly.

What You'll Gain:

- Mentorship from a seasoned Geospatial Data Engineer with experience in open-source ML/AI tools and geospatial data validation.
- Practical experience in applying optical image recognition for geospatial data validation.
- Hands-on involvement in a high-impact software project that supports climate risk assessment for Washington State's power grid.
- Opportunities to contribute to a project with significant real-world implications, benefiting the UW Climate Risk Lab and the broader community.
- Development of skills that are highly valuable in the growing field of geospatial data engineering and climate risk analysis.

To apply, send your resume/CV and a brief covering note by email to pdbruner@uw.edu

Applications close: midnight on Sept. 17th, 2024

Background:

The UW Climate Risk Lab is a multidisciplinary research and innovation center based at the [University of Washington Foster School of Business](#) in the Department of Finance & Business Economics. Established in 2022, we advance research and technology solutions to issues in climate-related financial risk for corporate and government decision-makers. [Professor Phillip Bruner](#), co-founder of the UW Climate Risk Lab, currently serves as our Executive Director.

We bring together academics and professionals in climate finance, risk management, business analytics, data engineering, computer science, atmospheric sciences, supply chain management, information systems and AI. We collaborate with several initiatives within the University of Washington which include the [Buerk Center for Entrepreneurship](#), [Clean Energy Institute](#), [Creative Destruction Lab](#), [Global Business Center](#), [eSciences Institute](#) and [Urban Infrastructure Lab](#).

Our external partners include: the [Duke Energy Data Analytics Lab](#), [EGADE Business School](#), [Pacific Northwest Mission Accelerator Center](#), [NY Climate Exchange](#) and [Washington Maritime Blue](#).

Our mission: "To make the best climate risk data, analysis and tools available to all."

Our vision: "A future where climate risk is accounted for in all organizational decision-making worldwide."