



Research Software Engineer / Scientist

Full-time
Fixed-term

Working with:
Nandita Basu
Julie Mai

Civil and Env.
Engineering &
Earth and Env. Science
University of Waterloo

Application deadline:
May 7, 2025

We are seeking a talented and motivated **Research Software Engineer / Scientist** (RSE) to join our interdisciplinary team at the University of Waterloo. This is a unique opportunity to work at the intersection of cutting-edge research and software development, supporting projects that push the boundaries of knowledge in machine learning, climate, and water sciences.

As an RSE, you'll collaborate closely with researchers to design, develop, and maintain software tools, data pipelines, and computational models that underpin high-impact academic research. Your work will directly contribute to the advancement of science, open-source development, and reproducible research.

Key Responsibilities

As a professional coder in our group, you will have the opportunity to:

1. Develop, maintain, and optimize software for research projects (Python, R, Fortran, C++, etc.) ensuring compatibility and performance efficiency.
2. Collaborate with academics and researchers to translate research questions into code
3. Support data management, analysis, and visualization workflows
4. Ensure code standards, quality, documentation, and reproducibility
5. Contribute to open-source projects or publications when applicable
6. Provide technical advice and training to research teams
7. Stay updated on emerging technologies and industry trends to continuously improve coding practices and methodologies.



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About you

We're looking for someone with a strong foundation in software development and a genuine interest in research. You don't need to be an academic—but you do need to be curious, collaborative, and willing to learn.

Essential Qualifications

- ✱ Bachelor's degree in Computer Science, Mathematics, Engineering, or a related field.
- ✱ Proficiency in at least one programming language commonly used in research (e.g., Python, R, C/C++, Java, etc.)
- ✱ Solid understanding of software development principles, version control systems, and debugging techniques.
- ✱ Excellent problem-solving skills and the ability to troubleshoot complex code-related issues.
- ✱ Effective communication skills and the ability to collaborate with cross-functional teams in a remote environment.
- ✱ Self-motivated with a strong commitment to delivering high-quality results within designated timelines.

Desirable Qualifications

- * Graduate degree.
- * Familiarity with parallel computing concepts and optimization techniques for distributed computing environments.
- * Knowledge of data science tools and libraries (e.g., pandas, NumPy, scikit-learn)
- * Interest in open science and reproducibility

What we offer

- * Competitive salary commensurate with experience.
- * Opportunities for professional development and career advancement.
- * A chance to work on diverse, meaningful projects with real-world impact
- * A collaborative and inclusive work environment.

Location

University of Waterloo

How to apply

- * Please submit your CV and a short cover letter to nandita.basu@uwaterloo.ca and juliane.mai@uwaterloo.ca. Please include "Research Software Engineer / Scientist" in the subject line.
- * Please also fill out the Google form ([link](#)) responding to a few questions that will help us to evaluate your skills and interests.

The deadline for submitting both of the above pieces of information is May 7, 2025. We will start shortlisting applications shortly after.

We will only reach out to the short-listed candidates.

If you're unsure whether you meet all the criteria, we still encourage you to apply—we're interested in people who are eager to grow into the role.