RESEARCH ENGINEER

As a UW employee, you have a unique opportunity to change lives on our campuses, in our state and around the world. UW employees offer their boundless energy, creative problem solving skills and dedication to build stronger minds and a healthier world.

UW faculty and staff also enjoy outstanding benefits, professional growth opportunities and unique resources in an environment noted for diversity, intellectual excitement, artistic pursuits and natural beauty.

The Institute for Health Metrics and Evaluation (IHME) is an independent research center at the University of Washington. Its mission is to monitor global health conditions and health systems, as well as to evaluate interventions, initiatives, and reforms. IHME carries out a range of projects within different research areas including: the Global Burden of Diseases, Injuries, and Risk Factors; Future Health Scenarios; Costs and Cost Effectiveness; Local Burden of Disease; Resource Tracking; and Impact Evaluations. The aim is to provide policymakers, donors, and researchers with the highest-quality quantitative evidence base to make decisions that achieve better health.

**IHME has an exciting opportunity for a full-time Research Engineer to join the COVID-19 Forecasting Project.**

**About our Team**

The COVID-19 Forecasting Project’s aim is to provide policymakers, donors, and researchers with the highest-quality quantitative evidence base to make decisions that achieve better health. The Production Team is responsible for running our central modeling pipeline; generating weekly estimates of deaths, cases,
infections, and hospitalizations. The team then delivers results to users through a visualization tool and policy briefing documents, both viewed by hundreds of thousands of users on a weekly basis. Utilizing results from weekly updates, the production team is then responsible for creation of tables, figures, and maps for presentations and direct communication with stakeholders. The team is agile in creating new sub-analyses, changes to the modeling pipeline, and short-term analyses for external partners.

About the Role

This position will be part of an interdisciplinary team focused on operating and improving our production pipeline to publish weekly COVID-19 projections updates. The individual must learn how multiple components of a complex analytical process relate to one another, learn the nature of the key indicators and variables being analyzed, and identify and implement ways to improve performance while maintaining high-quality and reproducible scientific results.

This position requires a strong background in writing scientific software and an ability to translate production requirements into a concrete software development plan with the assistance of senior technical and research staff. The individual will have primary responsibility for running the COVID-19 production pipeline on a rotating basis with other research and technical staff. In addition, the individual will design and implement solutions that improve performance and can easily be utilized by other staff with less coding experience. The position ensures the software developed is appropriately flexible, scalable, and efficient. The position calls for dexterity working with multiple coding languages (primarily Python and R).

This position is contingent on project funding availability.

Responsibilities:

Tool development & support
- Execute analytic machinery in a coordinated manner in order to achieve key deliverables on deadline.
- Develop integrated tools and diagnostics into complex computational processes to enable non-expert users to execute analytic processes and assess results.
- Contribute to the refactoring of existing code to improve efficiency, operability, and performance while maintaining high-quality results.
- Follow software development best practices (e.g. source control, documentation, writing tests, etc). Test, implement, and support analytic methods as appropriate.
- Develop and use protocols to identify problems with datasets and routine computational processes, rectify issues, and systematize data for future analyses.
- Provide timely and comprehensive user support via help desk ticket investigation and bug resolution.
- Actively participate in code review with fellow staff.

Research Command
- Exhibit command of the dimensions and uses of health data in IHME analytic pipelines.
- Demonstrate an understanding of the analytic components of the research program and how they operate.
- Distinguish between research requirements and implementation requirements
- Continually seek new knowledge and collaborate with researchers and faculty to gain a better understanding of analytical components and research methodology.

General
- Communicate clearly and effectively while contributing as a productive member of the team and the Institute as a whole.
• Work closely with other team members to help them with relevant tasks, show them how to learn new skills, and help resolve problems across projects.
• Participate in internal trainings.

As a UW employee, you will enjoy generous benefits and work/life programs. For a complete description of our benefits for this position, please visit our website, click here.

REQUIREMENTS

Bachelor's degree in Computer Science, Mathematics, Engineering, Statistics or related and two years of related experience OR Equivalent combination of education/experience.

Equivalent education/experience will substitute for all minimum qualifications except when there are legal requirements, such as a license/certification/registration.

Additional Requirements:
• Demonstrated expertise in developing code in Python, Java, R, and/or other coding language. [Python most preferred including pandas, NumPy, and xarray]
• Experience deploying software to Linux servers.
• Strong sense of focus and attention to detail.
• Ability to plan and organize technical projects.
• Works well with others to solve problems, define priorities, and achieve common goals.
• Demonstrated organizational skills, self-motivation, flexibility, strong communication skills, and the ability to thrive in a fast-paced, energetic, highly creative, entrepreneurial environment.

A commitment to working to alongside others at IHME to illuminate the health impacts of systemic racism and to work within IHME to make our organization more diverse and inclusive. See IHME's DEI statement here: http://www.healthdata.org/get-involved/careers/dei

DESIRED

• Experience with application containerization using tools such as Docker, Kubernetes, and Rancher.
• Good applied statistics skills, such as distributions, statistical testing and regression.
• Statistics and/or public health interest
• Experience with relational databases e.g., MySQL, PostgreSQL
• Automation experience

CONDITIONS OF EMPLOYMENT

• Weekend and evening work sometimes required.
• This position is open to anyone authorized to work in the U.S. The UW is not able to sponsor visas for staff positions.
• Office is located in Seattle, Washington. While this position is eligible to work fully remote in the U.S., schedule must be worked out with the supervisor and will be expected to primarily overlap with IHME office hours (8 a.m. and 6 p.m. Pacific Time).
• This position is open to anyone authorized to work in the U.S. The UW is not able to sponsor visas for staff positions.
• The University of Washington requires students and personnel to be vaccinated against COVID-19. Under state regulations, individuals who are not fully vaccinated are required to wear masks while in all UW buildings and facilities. To learn more about the requirements, please review the following: https://www.washington.edu/coronavirus/vaccination-requirement/.
Application Process:
The application process for UW positions may include completion of a variety of online assessments to obtain additional information that will be used in the evaluation process. These assessments may include Workforce Authorization, Cover Letter and/or others. Any assessments that you need to complete will appear on your screen as soon as you select “Apply to this position”. Once you begin an assessment, it must be completed at that time; if you do not complete the assessment you will be prompted to do so the next time you access your “My Jobs” page. If you select to take it later, it will appear on your “My Jobs” page to take when you are ready. **Please note that your application will not be reviewed, and you will not be considered for this position until all required assessments have been completed.**

Applicants considered for this position will be required to disclose if they are the subject of any substantiated findings or current investigations related to sexual misconduct at their current employment and past employment. Disclosure is required under [Washington state law](#).

Committed to attracting and retaining a diverse staff, the University of Washington will honor your experiences, perspectives and unique identity. Together, our community strives to create and maintain working and learning environments that are inclusive, equitable and welcoming.

The University of Washington is a leader in [environmental stewardship & sustainability](#), and committed to becoming climate neutral.

The University of Washington is an affirmative action and equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, gender expression, national origin, age, protected veteran or disabled status, or genetic information.

To request disability accommodation in the application process, contact the Disability Services Office at 206-543-6450 or dso@uw.edu.

**COVID-19 VACCINATION REQUIREMENT**

Governor Inslee's [Proclamation 21-14.2](#) requires employees of higher education and healthcare institutions to be fully vaccinated against COVID-19 unless a medical or religious exemption is approved. Being fully vaccinated means that an individual is at least two weeks past their final dose of an authorized COVID-19 vaccine regimen. As a condition of employment, newly hired employees will be required to provide proof of their COVID-19 vaccination. View the [Final candidate guide to COVID-19 vaccination requirement webpage](#) for information about the medical or religious exemption process for final candidates.