Research Scientist

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 excellent opportunity for two Research Scientists to join the Simulation Science team. This position is focused on simulation modeling to quantify the potential costs and effects of health interventions designed to reduce child mortality and non-communicable disease burden globally. The objectives of the project are to develop modular components for our Python-based microsimulation framework and to validate/verify their behavior independently and in combination. This will require conducting background research into health interventions, risk factors, and diseases to understand current knowledge about their impacts and pathways and how this knowledge corresponds to GBD concepts; working with software engineers who will be programming in Python to implement and test modular components necessary for simulation models; and communicating results to the Simulation Science team lead.

We are looking for someone who has: experience with simulation modeling, the ability to develop new methods and tools, and familiarity with epidemiology, statistics, disease modeling, data science, or related interests. You will be integrally involved in producing, critiquing, improving, and disseminating results. You are someone that is capable of keeping your team on track to meet deadlines and research objectives. You have experience with the publication process, and at IHME, you will build out your portfolio with several peer-reviewed papers. You thrive in a collaborative work environment and are capable of working on multiple projects concurrently while meeting deadlines. You keep current of recent scientific, engineering and technical advances and are able to translate these into your research. This position is contingent on project funding availability.

Responsibilities

- Exhibit command of multiple health intervention models on the Simulation Science, including the methodology and its epidemiological components.
- Independently carry out quantitative analyses and participate in reciprocal research projects. Interpret and vet results from junior staff, formulate conclusions and inform team leaders.
- Develop, quality check, and distribute complex data sets to be used in epidemiological and statistical analyses.
- Model causes of death, non-fatal health outcomes, and risk factor exposures using data from a multitude of sources and applying complex algorithms and statistical applications.
- Develop and implement new computational and statistical methods. Create, test, and use relevant computer code in Python. Maintain, modify, and execute analytic machinery that results.
- Draft presentations, manuscripts, and contribute to funding proposals. Lead and co-author scientific articles in peer-reviewed journals.
- Maintain scientific awareness and intellectual agility with data, methods, and analytic techniques.
• Oversee staff to include: hiring and training; leading workflow; priority setting; critiquing work and establishing quality standards; conducting regular performance assessments, providing mentorship and professional development for employees.

• Provide ideas and content for the development of internal trainings. Teach established trainings.

• Contribute to research design.

• Other duties as assigned that fall within reasonable scope of research team.

Requirements

Minimum

• Master’s degree in public health, epidemiology, statistics, biostatistics, math, economics, quantitative social sciences or related discipline plus four years related experience or equivalent combination of education and experience.

• Excellent analytic, critical thinking, and quantitative skills.

• Results and detail-oriented individual that can initiate and complete tasks under tight deadlines and changing priorities both independently and in a team environment. Flexibility with hours and workload is key.

• Experience devising and executing statistical modeling techniques.

• Demonstrated ability to quickly recognize problems in results and identify root causes in data, methods, and code.

• Ease in designing, executing, and troubleshooting code in one or more languages (e.g. R, Python, Stata).

• Excellent written and oral communication skills required, including track record of success in co-authorship on multiple scientific papers, presenting results, and representing research at meetings.

• Ability to work both independently and in collaboration with a team

• A long-term interest in a research scientist position contributing to the overall mission of our research

Desired

• PhD or MD in public health, epidemiology, statistics, biostatistics, math, economics, quantitative social sciences plus two years’ experience preferred.

• Experience with machine learning, data mining, and analytic techniques.

• Experience programming in Python.

• Experience mentoring and developing junior employees on soft and technical skills.

• Experience with project management methods.

• Peer-reviewed publication record.

Condition of employment:

• Appointment to this position is contingent upon obtaining satisfactory results from a criminal background check.

• Weekend and evening work sometimes required.

Further Information: See IHME’s website: www.healthdata.org

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.