

Position Description

The Foy Lab at the University of Washington, Department of Laboratory Medicine & Pathology is seeking a Postdoctoral Scholar to work on a range of projects at the intersection of mathematics, machine learning and clinical pathology. Projects will involve development of computational tools for generating tangible clinical impact using high-throughput clinical data streams. A PhD in statistics/computer science (or a related field), and significant experience with statistical data analysis is essential. Experience with computer vision or Bayesian inference, and prior work in healthcare applications is strongly desirable.

Specific projects would be tailored to applicant skillsets and career goals. Potential projects include:

- Developing Bayesian methods to adaptively define what counts as a ‘normal’ laboratory test result, across millions of patients.
- Developing unsupervised learning, and statistical modelling approaches to generate inferences from novel high-throughput flow cytometry data streams.
- Developing computer vision approaches to track morphologic changes in blood cell populations over time.

The successful applicant would have significant intellectual freedom, and be given opportunities to develop new skills and shape the research program, while contributing to projects that can actively improve clinical care and operations.

The Lab

The Foy Lab works on a range of projects at the intersection of mathematics, machine learning, and medicine, with particular focus on hematology applications. We build computational tools to support clinical operations, enhance patient care, and uncover novel physiology. Examples include developing computer vision tools to detect blood cell abnormalities, using large-language models to enhance drug screen sign-outs, and developing personalized and adaptive benchmarks for laboratory tests. We are a supportive and friendly group, whose goal is to build open tools that can actually get deployed in clinic.

Duties & Responsibilities

- Develop and conduct research within the themes of the Foy Lab
- Support training and supervision of junior lab members
- Contribute to lab operations, research advocacy and grant writing

Appointment Details

The position is a twelve-month appointment at 100% FTE, with strong likelihood to extend employment to future years. The post is hosted at the University of Washington in Seattle, USA – though partial remote work flexibility is available. The anticipated start date is Aug 1st 2024, but flexibility is available for the right candidate. Expected salary is approximately \$70,000 USD per year. Visa support is available for candidates without US citizenship or permanent residency.

Instructions

To apply, please submit the following via email to Dr Brody Foy (brodyfoy@uw.edu):

- A cover letter detailed past research experience, and future goals
- Curriculum vitae
- A copy of at least one first-author publication or pre-print