Postdoctoral Associate in Pharmacoepidemiology/Drug safety/ high-throughput computing

The Department of Physiology & Pharmacology at Schulich School of Medicine & Dentistry, in collaboration with the Department of Computer Science at Western University, invites applications for one postdoctoral researcher in Pharmacoepidemiology/Drug safety/ high-throughput computing. The position will focus on drug safety and integrate high-throughput computing, machine learning techniques, information visualization, and advanced statistical techniques into the analysis of the provincial administrative healthcare data housed at ICES (https://www.ices.on.ca/Data-and-Privacy/ICES-data). The Postdoctoral Research Fellow will work collaboratively with the project team and, under the direction of the Principal Investigator (Dr. Muanda) and the co-investigator (Dr. Sedig), will provide analytic input to complete their assigned projects and benefit from an active well-funded interdisciplinary research environment, peer-reviewed publication as the first author and co-author, and competitive grant writing opportunity. Salary and benefits will be highly competitive and commensurate with experience. The terms and conditions of the appointment will be governed by the collective agreement with the Public Service Alliance of Canada (PSAC).

Closing date: Open until a suitable candidate is found.

Start date: Negotiable start date

Duration of appointment: 2 years with potential for renewal conditional on funding and performance.

How to apply

Interested applicants should submit their curriculum vitae, a cover letter describing their experience in drug safety research and data science and research interests, and the names and contact information of at least two references to:

Dr. Flory T Muanda,
Assistant Professor, Department of Physiology & Pharmacology,
Assistant Professor, Department of Epidemiology & Biostatistics
Adjunct Scientist, ICES Western
Schulich School of Medicine & Dentistry
Western University
E-mail: fmuandat@uwo.ca

Key Responsibilities:

- Develop and execute a data set creation plan and analysis plan for their assigned projects.
- Develop SAS/R/python programs to extract and merge data from existing ICES databases according to data set creation plans to create study cohorts following analytic standards and guidelines.
- Carry out machine learning and statistical analysis on developed study cohorts according to specifications of project analysis plans.
- Prepare and review (with the principal investigator as required) analytic output (e.g., tables and reports).
- Liaise with epidemiologist/project manager, PI/Staff Scientist, ensuring checkpoints are being done as part of the process.
- Work effectively and efficiently according to ICES Western policies, procedures, standards, workflow processes, documents, and requirements.
- May contribute to writing reports (technical reports/working papers/ICES publications/web-based summaries), abstracts, poster presentations, peer-reviewed publications, and other relevant deliverables.
- May interface with internal and external stakeholders to support the project, such as expert panels, committees, and team meetings.
- May facilitate the uptake of knowledge by local decision-makers across Ontario through the presentation of findings, education sessions, and one-on-one interactions as required.
- Perform other duties as assigned within the scope of the position.

Required qualifications:

Education:

- Recent Ph.D. degree (within the last three years) in Computer Science, biostatistics, epidemiology, or related field.

Experience:

- Experience (at least 1 year) conducting drug safety-related projects using high-throughput computing to analyze healthcare administrative databases (Asset)
- Working knowledge of how to use administrative data or other large population-based data sets in health services research.
- Working knowledge of SAS, R, and Python.

Technical Skills:

- SAS programming skills; Knowledge of R and SQL.

- Experience with Python software packaging, virtual environments, Anaconda/Conda, and Jupyter/IPython.
- Basic understanding of the concepts of health services research and understanding of core bio-statistical analytic techniques.
- Proficient in using MS Office software (Word, Excel, PowerPoint and Outlook, Internet Explorer) and working with computerized databases.
- Well-developed oral, written, and interpersonal communication skills; Ability to manage and prioritize workload responsibilities and timelines.
- Ability to work accurately and effectively under pressure and to meet deadlines.
- Must be able to work independently and in a collaborative team environment.
- Must be able to interact effectively with diverse stakeholders.

Preferred Skills:

- Experience with developing rich interactive visualizations through data interpretation and analysis.
- Experience with machine learning libraries such as Scikit-learn, Theano, TensorFlow, Keras, PyTorch.

About Western

Western ranks as one of Canada's top research-intensive universities. From fundamental to applied discovery and other scholarly activities, its scholars advance knowledge that provides tangible benefits for the economic, social, health and cultural development of citizens in London, in Canada, and around the world. Western Research supports scholars through collaboration, communication, and service. Western University and its affiliate colleges received more than $267 million in research funding over the past year.

Western Values Diversity

The University invites applications from all qualified individuals. Western is committed to employment equity and diversity in the workplace and welcomes applications from women, members of racialized groups/visible minorities, Indigenous persons, persons with disabilities, persons of any sexual orientation, and persons of any gender identity or gender expression. Accommodations are available for applicants with disabilities throughout the recruitment.