JOB POSTING, POST-DOCTORAL FELLOW

Area of Research: Health Services Research, Statistical Learning

Project summaries:

The common focus across these projects is that they draw on large administrative health system datasets as well as large population-based surveys – the Canadian Longitudinal Study of Aging (CLSA) and the Ontario Health Survey (OHS) – and use statistical learning tools to examine the progression and predictors of specific diseases – dementia, breast cancer and cardiovascular disease in breast cancer. In the first phase, the candidate will work to identify and apply suitable statistical and machine learning techniques for trajectory discovery and validation. In the second phase, characteristics of these trajectories will be investigated for inclusion in predictive models of disease progression and endpoints. The support for these position comes from three different research grants, each targeting a specific disease. The research teams for each of these comprise disease specific clinical and epidemiological experts. The candidate will provide a required analytic expertise that is common to these projects and will be expected to liase with researchers on these teams.

Description of duties:

The Institute of Health Policy, Management and Evaluation (IHPME) is seeking a Post-Doctoral Fellow who will take a leadership role in a set of CIHR-funded health services research projects that involve the analysis of health system administrative data sources and population-based surveys. The work will be focused on the application of statistical learning methods including traditional regression-based techniques, machine learning /algorithmic techniques and deep learning techniques. The research will focus on supervised and unsupervised learning to study specific clinical conditions including dementia, cardiovascular disease and breast cancer. The goal of the work is to better define the course of these common conditions and to investigate risk factors for disease progression.

S/he will report to the Principal Investigator, Professor Geoffrey Anderson.

Responsibilities include:

- Conducting literature and document reviews that describe the methods that will be used in the research;
- Coding and documentation in a range of advanced analytical languages (e.g. R, Stata, Python, TensorFlow);
- Conducting sophisticated analyses using a range of statistical learning techniques;
- Leading the drafting of methods and results section for journal submissions and project reports;
- Analyzing and summarizing findings and drafting reports and/or manuscripts and contributing to knowledge translation activities;
- Liaising with a national research team to ensure consistency in methodology;
- Supervising junior staff (e.g., work-study students, analysts);
- Presenting findings at relevant conferences.

Salary:

$55,000-65,000 per annum depending on candidate, skills and experience.

Please note that should the minimum rates stipulated in the collective agreement fall below the rates stated in this posting, the minimum rates stated in the collective agreement shall prevail.

Required qualifications:

PhD, obtained within five years of hiring, in a relevant statistical, epidemiological or computer science discipline. The successful candidate must have extensive experience with quantitative methods and experience in documenting and presenting complex analyses. The candidate must have the ability to work independently and direct projects, while also working collaboratively with the PI and other research team members. Experience preparing manuscripts for submission to peer-reviewed journals is also required along with experience presenting findings at relevant conferences.

Minimum Degree Required: Ph.D.

Preferred Qualifications:

Application instructions:

All individuals interested in this position must submit a CV and two letters of references to Professor Geoff Anderson at geoff.anderson@utoronto.ca by the closing date. Optional application documents include cover letter, dissertation abstract, writing sample/publications and research abstract.

Closing date:

Supervisor: Professor Geoff Anderson, Institute of Health Policy, Management and Evaluation

Expected start date: Immediately upon successful selection of an applicant

Term: This is a one-year position, renewable for a second year subject to availability of funding and performance of the postdoc.

FTE:

The normal hours of work are 40 hours per week for a full-time postdoctoral fellow (pro-rated for those holding a partial appointment) recognizing that the needs of the employee, research and training and the needs of the supervisor, research program may require flexibility in the performance of the employee, duties and hours of work.
Employment as a Postdoctoral Fellow at the University of Toronto is covered by the terms of the
CUPE 3902 Unit 5 Collective Agreement.

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The University of Toronto is strongly committed to diversity within its community and especially
welcomes applications from racialized persons / persons of color, women, Indigenous / Aboriginal
People of North America, persons with disabilities, LGBTQ persons, and others who may contribute
to the further diversification of ideas.