

Postdoctoral Fellow in Natural Language Processing

Position Summary

Applicants are invited to apply for a Postdoctoral Fellowship within the Manitoba Centre for Health Policy (MCHP). The Manitoba Centre for Health Policy (MCHP) is a research unit within the Rady Faculty of Health Sciences, Dept. of Community Health Sciences. MCHP is a grant funded research unit that has the responsibility for the establishment and on-going development and maintenance of the world-class Population Research Data Repository (Repository) and its supporting systems as well as conducting policy relevant research using the Repository. The Repository is unprecedented internationally in terms of its comprehensiveness, degree of integration, and orientation around a population registry. It includes information derived from the health care system as well social data. The data files are de-identified but linkable at the individual level and support history building across all files over a 30-year period. MCHP has built a Repository to enable researchers to carry out population-based research on health services, population and public health, and the social determinants of health, within legislative privacy regulations and ethical frameworks. MCHP relays its research results through knowledge translation best practices to provincial and federal decision-makers, analysts, and providers. MCHP has an annual budget in excess of \$4million, has 50 staff and supports 35 graduate students annually.

This CIHR funded position will work under the joint direction of Dr. Alan Katz (MCHP Director and CIHR fund holder), Dr Evangelos Milios, University Research Professor & Deep Sense Scientific Director Faculty of Computer Science, Dalhousie University and Dr Berry de Bruijn at the National Research Council in Ottawa. The postdoctoral fellow will collaborate with Computer Scientists at Dalhousie University and The National Research Council and Population Health Researchers and analysts at MCHP. This two year fellowship will develop a research program in the area of Free Text Analysis of clinical notes and medical reports linked to the Population Research Data Repository. Linkage with the Repository requires an understanding of the use of SAS and close collaboration with SAS analysts. While this position will be physically located at the Manitoba Centre for Health Policy, University of Manitoba, the successful applicant may work virtually depending on travel restrictions.

Qualifications

- PhD in Computer science, computer engineering or a related field.
- Experience with and interest in pursuing a career in natural language processing, text mining or machine learning for text using deep language models.
- Outstanding and demonstrated skills writing for peer reviewed publication.
- Excellent verbal communication skills.

- Ability to work with a high degree of independence and initiative.
- Ability to make and adhere to self-imposed timelines.

Duties and Responsibilities

- Under the direction of Dr. Katz, the fellow will collaborate with Dr Milios and Dr de Bruijn in applying the evolving NLP techniques based on deep language models (such as Bidirectional Encoder Representations from Transformers) to the analysis of electronic medical record free text clinical notes and imaging reports and their linkage to the structured patient data held in the Repository.
- This is a full-time position for a two-year period, contingent on satisfactory performance. The Fellow will receive a salary of \$55,000 - \$58,000 (commensurate with qualifications) with full staff benefits, university office space, use of appropriate computer services, and access to university libraries.

To Apply

Interested candidates should submit their application (a cover letter, curriculum vitae, two recent publications, and the contact information of three academic references) to: Sophie Buternowsky: [Sophie Buternowsky@cpe.umanitoba.ca](mailto:Sophie.Buternowsky@cpe.umanitoba.ca)

All applicants are thanked in advance; only those selected for further consideration will receive a response. Review of applications will begin on receipt and will continue until this position is filled. The position will begin on April 1 or as soon as possible thereafter.

The University of Manitoba is strongly committed to equity and diversity within its community and especially welcomes applications from women, racialized persons, Indigenous Peoples, persons with disabilities, persons of all sexual orientations and genders, and others who may contribute to the further diversification of ideas. If you require accommodation supports during the recruitment process, please contact U of M's Equity, Diversity and Inclusion Facilitator, Valerie Williams at Valerie.williams@umanitoba.ca or 204-474-8371.. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

We thank all applicants for their interest; however, only those individuals selected for an interview will be contacted.

Application materials, including letters of reference, will be handled in accordance with the protection of privacy provision of *The Freedom of Information and Protection of Privacy* (Manitoba). Please note that curriculum vitae may be provided to participating members of the search process.