Health Data Science Research Assistant for Multiple Sclerosis Prediction Project

POSITION IDENTIFICATION

Position Title: Research Assistant
Classification Title: Graduate Academic Assistant (GAA)
VP/Faculty: Medicine
Department: School of Population and Public Health (SPPH)
Pay/month: CAD $1,518-$1,814 based on relevant experience for 12 contact hours per week, with potential for additional hours.
Duration: Minimum 1-year commitment
(Starting from September 2024, could extend up to 3 years)
Positions Available: 1
Reporting: Dr. M. Ehsan Karim, Assistant Professor, SPPH, UBC

JOB SUMMARY

The successful candidate will join a research team at the University of British Columbia (UBC) working on a CIHR funded project aimed at developing a risk prediction algorithm to identify individuals in the prodromal phase of Multiple Sclerosis (MS). This project involves utilizing extensive health administrative data from British Columbia and Sweden to identify predictors and validate a risk prediction model. This project aims to transform early detection and intervention strategies, significantly improving outcomes for individuals at risk of developing MS.

ORGANIZATION STATUS

This project operates out of the School of Population and Public Health (SPPH), Faculty of Medicine, at the Vancouver Campus of the University of British Columbia (UBC). The nominated principal investigator for this project is Dr. Ehsan Karim, an assistant professor in Health Data Science at the UBC SPPH.

RESPONSIBILITIES

The successful candidate will be responsible for the following activities, working closely/in collaboration with the principal investigator:

- **Data Management**: Access, clean, and manage large datasets from BC and Sweden, including data entry, verification, and updating records. Work with team members of the project collaboratively.
- **Algorithm Development**: Assist in the development of a risk prediction algorithm to identify individuals in the prodromal phase of MS using statistical and machine learning techniques.
- **Data Analysis**: Perform advanced statistical analyses, including logistic regression, survival analysis, and machine learning methods, to develop and internally and externally validate the algorithm.
- **Research Contribution**: Contribute to the project's themes such as internal and external validation of the algorithm, and sensitivity analyses to ensure robustness and reliability.
- **Documentation and Reporting**: Maintain detailed documentation of all coding scripts, methodologies, and data analysis procedures. Regularly report on project progress, challenges, and milestones.
Knowledge Dissemination: Assist in drafting and publication of scientific manuscripts, presentation of findings at conferences, preparing web-apps, and preparation of lay summaries and technical reports.

Ethical Standards and Data Security: Adhere to strict ethical standards in handling and processing data, ensuring robust data security measures to protect sensitive information.

TRAINED BENEFITS

Academic Integration: Opportunity to incorporate the research into MSc/PhD thesis work, facilitating progress towards degree completion. In that case, GAA will be converted to a GRA position, and the payment will be converted to research stipend.

Research Skills: Gain hands-on experience in conducting research using health administrative data, enhancing methodological and analytical skills.

Methodological Development: Potential to extend the research problem into the development of new statistical/methodological techniques.

Publication and Presentation Opportunities: Co-author high-impact journal publications and present findings at national and international conferences.

Professional Development: Build a strong professional network through collaboration with leading experts and participation in high-impact research projects.

SUPERVISION RECEIVED

The Research Assistant will work closely with and report to the nominated principal investigator. The Research Assistant will undergo instructions either at SPPH or online.

SUPERVISION GIVEN None expected at this time.

WORKING CONDITIONS

The Research Assistant will be located in the SPPH building. A desk in a shared workspace will be provided, but may have the option to work remotely, subject to the supervisor’s approval.

QUALIFICATIONS

Education:
- Enrolled in a PhD or MSc program in statistics, biostatistics, computer science, biomedical engineering, epidemiology, pharmacoepidemiology, or a related field. Alternatively, have completed an MSc degree in any of the aforementioned or a related field.

Experience:
- Demonstrated potential to excel in research.
- Experience with health administrative databases is preferred but not required.

Skills:
- Familiarity with statistical software and techniques including prediction modelling, logistic regression, survival analysis, and machine learning methods.
- Strong verbal and written communication skills.
- Ability to plan and complete work assignments independently.
- Knowledge of recent advances in MS research is an advantage (not a requirement).

Technical Proficiency:
- Proficiency in using data analysis software such as R, RStudio, and RMarkdown.
**Application Requirements:**
- Cover Letter, detailing your interest in the position, relevant courses, experience (e.g., predictive modelling).
- Resume or CV.
- Unofficial transcript of your current or most recent degree.
- Contact information for two references who can speak to your work ethic.

**Application Deadline:**
**Sept 15th, 2024.** However, please note that applications will be reviewed on a rolling basis, and the position will remain open until filled. We strongly encourage interested candidates to apply soon.

**How to Apply:**
Please submit your full application package to ehsan.karim@ubc.ca. For further information, visit [https://ehsank.com/](https://ehsank.com/) or contact Dr. Ehsan Karim directly.

**Commitment to Equity, Diversity, and Inclusion:**
Equity and diversity are essential to academic excellence. An open and diverse community fosters the inclusion of voices that have been underrepresented or discouraged. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the B.C. Human Rights Code, including sex, sexual orientation, gender identity or expression, racialization, disability, political belief, religion, marital or family status, age, and/or status as a First Nation, Metis, Inuit, and/or Indigenous person.