



**University
of Manitoba**

Canada Research Chair, Tier 2, in Artificial Intelligence for Complex Health Data

**Artificial Intelligence for Complex Health Data, Canada Research Chair, Tier 2
Department of Community Health Sciences & George and Fay Yee Centre for Healthcare Innovation
Max Rady College of Medicine, Rady Faculty of Health Sciences
Position Numbers 27188 and 27189**

The University of Manitoba invites applications for a Tier 2 Canada Research Chair, a tenure-track position at the rank of assistant or associate professor, in the area of Artificial Intelligence (AI) for Complex Health Data.

The Government of Canada has established the CRC program to enable Canadian universities to foster world class research excellence. The proposed CRC aligns with the University's Strategic Research Plan that identifies Understanding and Communicating Information as a targeted area and Integrative Research in Health and Well-being as an established area of research excellence.

THE POSITION:

The successful candidate will be appointed in a tenure-track position to the Department of Community Health Sciences (CHS), Max Rady College of Medicine, Rady Faculty of Health Sciences (RFHS) (http://umanitoba.ca/faculties/health_sciences/medicine/units/chs/).

The Department of Community Health Sciences (CHS) (<https://umanitoba.ca/medicine/medicine/departments-community-health-sciences-chs>) is a research and training-intensive interdisciplinary department that focuses on creation, preservation and communication of knowledge with respect to the health of populations and thereby contributes to the well-being of the people of Manitoba, Canada and the world. Currently, CHS has 53 full-time faculty members, including 9 Canada Research Chairs, and the largest graduate program in RFHS. CHS has active collaborative research and educational programs in epidemiology, biostatistics, health-related social sciences, global public health, Indigenous health, family health, violence and injury prevention, aging and other related areas. While the primary appointment will be in CHS, the candidate will be positioned within the Data Science Platform of the George and Fay Yee Centre for Healthcare Innovation (CHI; <https://chimb.ca/pages/6-data-science>).

CHI, a joint initiative of the Winnipeg Regional Health Authority (WRHA) and the University of Manitoba, is the home of Manitoba's CIHR-funded Strategy for Patient-Oriented Research (SPOR) SUPPORT Unit. CHI's vision is to be a catalyst for healthcare providers, healthcare decision makers and healthcare researchers in Manitoba to generate and facilitate the use of knowledge to improve the health of Manitobans within a sustainable framework. Its mission is to ensure that the latest research and evidence are translated into improvements to care and outcomes for Manitoba patients. The Data Science Platform within CHI is home to 25+ faculty, staff, and graduate students with expertise in

biostatistics, bioinformatics, and clinical research database management who conduct independent methodological research, lead training initiatives, and provide methodological expertise in collaborative and interdisciplinary research. The Data Science Platform offers exceptional opportunities for the proposed Chair to develop an innovative research program, and engage in collaborative research with leading research groups and Centres with information-rich environments, such as the Manitoba Centre for Health Policy (MCHP), the Institute for Global Public Health and the Statistics Canada Manitoba Research Data Centre (RDC). MCHP is one of UM's premier research units housing an ever-expanding set of electronic datasets that include a globally unique combination of individually-linkable de-identified clinical and health services administrative databases, and province-wide databases from education, social services, justice and other sectors. IGPH researchers and their global partners conduct large-scale applied public health and program science intervention research while maintaining a dynamic data platform that contains over 240 datasets from five countries: India, Kenya, Nigeria, Pakistan and Ukraine. The RDC houses a wide variety of national surveys, many of which can be linked with administrative databases. The proposed Chair will have opportunity to collaborate with units that have many types of health and social data in order to develop AI solutions for real-world challenges.

RESPONSIBILITIES:

The successful candidate is expected to develop and lead an independent research program that focuses on building knowledge and research capacity in the use of computational and statistical AI techniques to extract useful information from multiple types of health data. Additionally, the candidate is expected to engage in collaborative research using advanced AI methods and tools to improve understanding of the value that can be derived from health data for basic, clinical, population health, and/or health services scientific domains. The Chair will have 75% protected time for research.

The successful candidate will have teaching responsibilities and is expected to supervise Master's and PhD students and post-doctoral fellows, and contribute to the development and delivery of short courses at CHI. The successful candidate will be responsible for enhancing the interdisciplinary training environment at the Rady Faculty of Health Sciences with the focus on building trainee technical skills in approaches to analyze, describe, visualize and model complex health data. There are also opportunities to participate in the NSERC-funded VADA (Visual and Automated Disease Analytics) Program and the CIHR-funded AI4PH (Artificial Intelligence for Public Health) National Training Platform. These initiatives train graduate students and/or postdoctoral fellows who work with health data and who have backgrounds in computer science, biostatistics, mathematics, health sciences, information technology, and the social sciences.

Service responsibilities will include participation in the academic administration of the University by serving on department, CHI, and University administrative committees as requested. Academic service to organizations external to the University of Manitoba is also expected.

QUALIFICATIONS:

The successful candidate must have a PhD and/or MD (or equivalent) in a relevant discipline, such as data science, computer science, engineering, mathematics, biostatistics, public health, or epidemiology at the time of application with research expertise in the use of statistical and/or machine-learning models and methods in applied clinical or population health sciences. Necessary qualifications for the position include evidence of high research quality and productivity appropriate to career stage, as demonstrated by a track record of strong research activity, research funding and academic output, and experience with mentorship of undergraduate, graduate and/or postdoctoral level trainees. Rank and salary will be commensurate with qualifications and experience.

A Tier 2 CRC Nomination will be submitted soon after a successful candidate has been selected. Chairs are awarded by the Tri-agency Institutional Programs Secretariat after a rigorous evaluation, and award decisions are expected in the spring of 2024. The appointment will be conditional on a successful Canada Research Chair nomination.

Applicants must be exceptional emerging scholars with less than 10 years of experience as an active researcher since obtaining their terminal degree at the time of nomination. Tier 2 Chairs are valued at \$100,000 per year for 5 years with an option to renew once. Applicants who are more than 10 years from having earned their highest degree, and where career breaks exist, such as maternity, parental or extended sick leave, clinical training, etc., will have their eligibility for a Tier 2 Chair assessed through the program's Tier 2 justification process. Please contact the UM's Office of Research Services (researchgrants@umanitoba.ca) office for more information (www.umanitoba.ca/research/ors/). The University acknowledges the potential impact that [Career Interruptions and Personal Circumstances](#) can have on an applicant's record of research achievement. We encourage applicants to explain the impact of any such interruption(s) in their submission. Measures will be taken to ensure that these leaves will be taken into careful consideration during the evaluation process. The CRC Nomination Selection Committee will receive equity training that includes instruction on how to recognize and combat unconscious, implicit, overt, prejudicial and other kinds of bias. The Canada Research Chairs website also provides full program information including details on eligibility criteria at: www.chairs-chaire.gc.ca/program-programme/nomination-mise_en_candidature-eng.aspx

EQUITY STATEMENT:

The University of Manitoba is committed to the principles of equity, diversity & inclusion and to promoting opportunities in hiring, promotion and tenure (where applicable) for systemically marginalized groups who have been excluded from full participation at the University and the larger community including Indigenous Peoples, women, racialized persons, persons with disabilities and those who identify as 2SLGBTQIA+ (Two Spirit, lesbian, gay, bisexual, trans, questioning, intersex, asexual and other diverse sexual identities). All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

If you require accommodation supports during the recruitment process, please contact UM.Accommodation@umanitoba.ca or 204-474-7195. Please note this contact information is for accommodation reasons only.

An inclusive, open and diverse community is essential to excellence and fosters voices that have been ignored or discouraged. To address the Rady Faculty of Health Sciences commitment to equity, diversity and inclusion, and in recognition of the underrepresentation of members of historically and currently excluded groups, we take proactive measures including implicit bias training for all hiring panels. We strive for diversity and cultural safety throughout the hiring process (hiring panels, short-list of candidates, interviews). We encourage you to self-identify any aspect of diversity in your cover letter.

The CRC nomination selection committee will receive equity training that includes instruction on how to recognize and combat unconscious, implicit, overt, prejudicial and other kinds of bias.

Application materials, including reference letters, will be handled in accordance with the Freedom of Information and Protection of Privacy Act (Manitoba). Please note that application materials may be provided to participating members of the search process.

The University of Manitoba is a driving force of innovation, discovery and advancement. Our momentum is propelled by our campus community – UM faculty, staff and students whose determination and

curiosity shape our world for the better. Our teaching, learning and work environment is uniquely strengthened and enriched by Indigenous perspectives. With two main campuses in Winnipeg, satellite campuses throughout Manitoba, and world-wide research, UM's impact is global.

Discover outstanding employee benefits, experience world-class facilities and join a dynamic community that values reconciliation, sustainability, diversity, and inclusion. The UM is one of Manitoba's Top Employers and one of Canada's Best Diversity Employers.

The City of Winnipeg (www.tourismwinnipeg.com), located where the Red and Assiniboine Rivers meet, has one of the most affordable housing markets in the country, and is recognized for its vibrant, multicultural community and diverse culture. The city, with a growing population of more than 766,000, is home to internationally renowned festivals, galleries and museums, the historic Exchange District and The Forks, and ever-expanding research, education, and business sectors. From the Hudson Bay waters, across the farmland fields, to the pulse of the cities and towns, The Province of Manitoba's (www.travelmanitoba.com) people and places – its 100,000 lakes, 92 provincial parks, winding river valleys and storied prairie skies – inspire.

APPLICATION PROCESS:

Application materials, including reference letters, will be handled in accordance with the Freedom of Information and Protection of Privacy Act (Manitoba). Please note that application materials may be provided to participating members of the search process.

Consideration of applications will begin on: April 3, 2023. Review of applications will continue until the position is filled.

Application materials should include:

- a cover letter outlining the candidate's qualification and how they fulfill the above-listed criteria;
- a curriculum vitae (including examples of significant research contributions);
- a 3-5 page summary of the proposed 5-year research program envisioned for the Tier 2 Chair including: rationale; description of originality and innovativeness; research objectives and methods; anticipated outcomes; significance; potential to attract funding and contribute to training; potential impact on the broader community; and engagement with research users.
- a 1-2 page statement on the candidate's knowledge, experience and contributions to diversity, equity and inclusion, and/or human rights and social justice activities in their teaching, research, service and/or other experiences, and how they envision contributing to EDI advancement with this position;
- a 1-2 page teaching statement that documents the candidate's experience in and approach to training and mentoring diverse students and the candidate's teaching philosophy; and
- the names and contact information of three referees

Send by email to:

Dr. Sharon Bruce, Head, Dept. of Community Health Sciences, Max Rady College of Medicine, Rady Faculty of Health Sciences, University of Manitoba

Email: Shannon.Turczak@umanitoba.ca (Executive Assistant to the Department Head).

Please refer to Position Numbers 27188 and 27189 in the subject heading of your email.