

Postdoctoral Fellow - Data Science & Neuroinformatics
Creating the first pan-Canadian Integrated Youth Services Data Federation and Data Platform
Krembil Centre for Neuroinformatics

The Krembil Centre for Neuroinformatics and The Margaret and Wallace McCain Centre for Child, Youth and Family Mental Health (PIs Dr. Sean Hill/Dr. Jo Henderson) Toronto are looking to hire a Postdoctoral Fellow with a strong background in Data Science & Neuroinformatics.

Project Overview: The Canadian Youth Mental Health Insight (CYMHI) Platform: Optimizing mental health for youth across Canada through open data, machine learning, and knowledge exchange. We aim to optimize mental health for youth across Canada by providing a state-of-the-art informatics platform to support knowledge and data integration, open data, machine learning, and improved communication between stakeholders.

The project will engage youth, family members, clinicians, service providers, policymakers, researchers, biomedical scientists, and data scientists from throughout Canada who will collectively design, build, and use the platform. The impact of the platform will be demonstrated through three core projects: personalized services recommender to match users to available services, precision predictive modeling to provide personalized trajectory prediction for decision support, and establishing a national youth mental health atlas to enable proactive data-driven policy decisions.

This position will engage in an exciting opportunity to develop and execute a novel, first of its kind in collaborative pan-Canadian youth mental health data platform, using approaches in data integration across population, community, and hospital-sourced data, which will operate under an equity- and engagement-centred data governance framework. This role also will include consultation with target users, development of service recommender systems, precision predictive modeling, and development of a national atlas. This role will have opportunities to participate in training in equity- and engagement-centred platform governance, advanced data science methods and application, Indigenous research methods, and youth, family, and stakeholder engagement.

The successful candidate will have a Ph.D. in Psychology, Social or Behavioral Sciences / Data Science and Neuroinformatics (Health Services Research, Public Health, Statistics, Biostatistics, and Epidemiology), or related health research or sciences discipline. Successful candidates will be required to have experience in the following:

- Data management, data integration, data analysis, data privacy and assessment, and quality assurance
- Ability to apply appropriate tools, techniques, and methodologies to extract meaningful data
- Sound knowledge of large language models, predictive modeling, and machine learning
- Manuscript preparation for publication and additional dissemination activities (e.g., conference presentations, outreach with local stakeholders)
- Participating in the development of new grant funding applications
- Engaging with youth and families for research purposes
- Have solid grounding in applied clinical research and statistics as well as have experience with mixed methods mental health research
- Strong quantitative and qualitative research skills in study design, measurement and data analysis
- Understanding of the issues facing youth experiencing marginalization, as well as youth with mental health and/or substance use concerns, and youth accessing services for mental health and substance use concerns is required, as is experience with implementation research in community mental health settings
- Bilingualism (French/English) and/or proficiency in a second language would be a strong asset.

For inquiries, please email Dr. Sean Hill (Sean.Hill@camh.ca) with the title **Postdoc Researcher - Data Science & Neuroinformatics** in the subject line.