Priyonto Saha

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Education

- **McGill University** *September 2025 – Present*
  Doctor of Philosophy in Biostatistics
  Thesis: TBD
  ◦ Supervised by Dr. Erica Moodie

- **University of Toronto, Dalla Lana School of Public Health** *September 2023 – October 2025*
  Master of Science in Biostatistics – Data Science and Artificial Intelligence Option
  Thesis: Propensity score weighting for clustered time-to-event data with dependent right-censoring
  ◦ Supervised by Dr. Kuan Liu

- **University of Waterloo** *September 2018 – October 2023*
  Honours Bachelor of Mathematics with Distinction, Co-operative Program
  Triple Major in Biostatistics, Computational Mathematics, and Combinatorics & Optimization

Publications and Presentations

C = Conference, J = Peer-Reviewed Journal, P = Preprint

[C] **Saha, P.**, Liu K. (2025) **Causal inference for observational studies with clustered survival outcomes subject to right-censoring**. *2025 Joint Statistical Meetings*, August 2 - 7, Nashville, Tennessee, United States of America.

[C] **Saha, P.**, Liu K. (2025) **A Causal Survival Analysis Approach for Multi-Level Health Data**. *2025 Statistical Society of Canada (SSC) Annual Meeting*, May 25 - 28, Saskatoon, Saskatchewan, Canada.

[C] **Saha, P.**, Marouf Y., Pozzebon H., et al. (2024). **Predicting Time to Diabetes Diagnosis Using Random Survival Forests**. *46th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, p. 70. July 15 - 19, Orlando, Florida, United States of America.

[C] **Saha, P.** (2024). **Using Multi-Level Collaborative Learning to Investigate Long COVID Causality**. *2024 SORA-TABA Annual Workshop & DLSPH Biostatistics Research Day*, May 13, Toronto, Ontario, Canada.

[C] **Saha, P.** (2024). **Equitable Long COVID Characterization at a Global Scale**. *Institute for Pandemics 2024 Interdisciplinary Symposium*, April 18, Toronto, Ontario, Canada. [Awarded 3rd Place]

[J] Liu, N., Plouffe, R. A., Liu, J. J. W., Nouri, M. S., **Saha, P.**, Gargala, D., Davis, B. D., Nazarov, A., Richardson, J. D. (2024). **Determinants of Burnout in Canadian health care workers during the COVID-19 pandemic**. *European Journal of Psychotraumatology*, Vol. 15, Issue 1. https://doi.org/10.1080/20008066.2024.2351782

[P] **Saha, P.**, Marouf Y., Pozzebon H., et al. (2024). **Predicting Time to Diabetes Diagnosis Using Random Survival Forests**. medRxiv. https://doi.org/10.1101/2024.02.03.24302304

[J] St. Cyr, K., Nazarov, A., Le, T., Nouri, M. S., **Saha, P.**, Forchuk, C. A., et al. (2023). **Correlates of cannabis use in a sample of mental health treatment-seeking Canadian armed forces members and veterans**. *BMC Psychiatry*, Vol. 23, Article number 836. https://doi.org/10.1186/s12888-023-05237-2

[C] Davis, B., Samadieh, M., Houle, S., **Saha, P.**, Du, Y., Nazarov, A., Richardson, J. D. (2023). **Network analysis exploring the association between posttraumatic stress disorder and moral injury symptoms in Veterans**. *Canadian Institute for Military and Veteran Health Research (CIMVHR) Forum 2023*, p. 122. October 16 - 18, Ottawa-Gatineau, Ontario, Canada.

[C] Dempster, K., St. Cyr, K., Davis, B., **Saha, P.**, Wanklyn, S., Nazarov, A., Richardson, J.D. (2023). **Investigating sex-based differences in chronic pain and mental health comorbidities in treatment seeking Canadian Armed Forces Veterans**. *Canadian Institute for Military and Veteran Health Research (CIMVHR) Forum 2023*, p. 117. October 16 - 18, Ottawa-Gatineau, Ontario, Canada.

Professional Experience

- **HIVE Lab, Dalla Lana School of Public Health, University of Toronto [🌐]** *September 2023 – August 2024*
  Data Science Research Student
  ◦ Designed a causal approach for cluster-correlated data to identify long COVID patients using federated learning.
  ◦ Outlined and drafted a manuscript for a AI-assisted scoping review on collaboration and data sharing in Canada.
  ◦ Provided statistical consulting for interdisciplinary research teams looking to apply AI methods in public health.

- **MacDonald Franklin OSI Research Centre, St Joseph's Health Care London [🌐]** *May 2022 – August 2023*
  Data Science Research Assistant
  ◦ Conducted daily statistical analyses with tasks including data pre-processing, multiple imputation, and modeling.
  ◦ Developed an NLP pipeline to process clinician notes for mental health triage and treatment-outcome prediction.

◦ Explored longitudinal trends in anxiety, depression, and PTSD of veterans during the pandemic with mixed models.
◦ Harmonized datasets from five different countries with feature engineering to facillitate interoperability.

- **TELUS Health [🌐]** *January 2021 – April 2021*
  Software Developer
  ◦ Developer in test for Medesync EMR, a web application for physicians to manage electronic medical records.
  ◦ Collaborated with multidisciplinary teams of developers and clinicians to design data validation scripts in Python.
- **Ontario Institute for Cancer Research [🌐]** *January 2020 – April 2020*
  Software Developer
  ◦ Front-end developer for ICGC-ARGO, an international data platform for collecting and analyzing cancer data.
  ◦ Implemented user-friendly dashboards with dynamic and interactive data visualizations as a front-end developer.
  ◦ Created pre-processing scripts to parse and format JSON files of clinical and genomic cancer data in Python.
- **RedIron Technologies [🌐]** *May 2019 – August 2019*
  Automation Engineer
  ◦ Designed automation infrastructure to streamline hours of manual testing to minutes using Java, Python, and SQL.
  ◦ Programmed a robot to automate repetitive testing on pin-pad and point of sale systems using Python.

Teaching Experience

- **STA 130 – An Introduction to Statistical Reasoning and Data Science** *January 2025 – April 2025*
  Teaching Assistant University of Toronto
- **STA 313 – Data Visualization** *September 2024 – December 2024*
  Teaching Assistant University of Toronto
- **SE 101 – Introduction to Methods of Software Engineering** *September 2021 – December 2021*
  Lead Teaching Assistant University of Waterloo
- **MDM4U - Mathematics of Data Management** *February 2017 – June 2018*
  One-on-One Tutor Vincent Massey Secondary School
- **Code Reach Youth Program** *September 2017 – June 2018*
  Instructor Vincent Massey Secondary School

Awards and Honours

- **McGill Zhongci Wang Marlene Abrams Fellowship - $45,000** *2025 – 2027*
  McGill University
- **SSC Student Travel Award** *2025*
  Statistical Society of Canada
- **Graduate Studentship Award - $10,000** *2024 – 2025*
  Institute for Pandemics
- **NextGen Scholar Award** *2024*
  IEEE Engineering in Medicine and Biology Society
- **Interdisciplinary Symposium Poster Competition – 3rd Place** *2024*
  Institute for Pandemics
- **Term Honours, Distinction** *2019 – 2023*
  University of Waterloo
- **President's Scholarship of Distinction** *2019*
  University of Waterloo

Technical Skills

- **Programming Languages:** R (tidyverse, mice), Python (PyTorch, scikit-learn), C++, SAS, MATLAB, Unix Shell
- **Tools & Technologies:** Git, LaTeX, Quarto, RMarkdown, Jupyter Notebook, SQL, Excel, Docker, Jira
- **Biostatistics Concepts:** Causal Inference, Cluster-Correlated Data, Survival Analysis, Longitudinal Data
- **Statistical Learning Models:** Regression (GLM, Penalization), Random Forest, SVM, Boosting, Neural Networks

Community Involvement and Leadership

- **Health Data Working Group** *September 2023 – August 2025*
  Student Member [🌐]
- **Biostatistics Union of Graduate Students** *September 2024 – August 2025*
  Vice President and Secretary [🌐]
- **Public Health Students' Association, University of Toronto** *September 2023 – August 2024*
  Biostatistics MSc Representative
- **Mathematics Society, University of Waterloo** *December 2021 – April 2022*
  Vice President of Operations [🌐]