Mike Liang

Personal Information

Pronouns:	He/him
Nationality:	Canadian
E-mail:	mlian031@uottawa.ca
Websites:	github.com/mlian031, mikeliang.me
Languages:	English, French, Cantonese, Mandarin

Education

Honours B.Sc. Mathematics & Economics (French Immersion, Co-op) 2024–2028
University of Ottawa, Department of Mathematics and Statistics
Ottawa, ON, Canada

Employment

Statistical Programmer May–August 2026
Statistics Canada, Ottawa, ON, Canada

- Produced firm survival tabulations for Innovation, Science and Economic Development Canada from linked administrative microdata (NALMF, CEEDD).
- For the International Monetary Fund, built a firm-level dataset from the Business Register and CEEDD to reassign firms coded as holding companies (NAICS 55) in NALMF to their next-largest industry, comparing rankings by revenue and by employment.
- Supported migration of legacy SAS macros to R.

Research Assistant 2024–Present
University of Ottawa, Department of Mathematics and Statistics, Ottawa, ON, Canada
Supervised by Dr. François-Michel Boire

- Built and maintain the open-source R codebase and interactive dashboard for the Canadian Housing Observatory, which tracks risk indicators for Canadian housing markets.
- Implemented importance sampling for option pricing under Merton jump-diffusion models in Python, reducing variance 16-fold.

Research

Work in progress:

* *Denotes shared first authorship.*

1. Boire, François-Michel*, and Liang, Mike*. “Exuberance from Coast to Coast to Coast: Regional Dependence in Canadian Housing Markets.” (code: github.com/mlian031/canhp-data)

Presentations

1. “Exuberance from Coast to Coast to Coast: Regional Dependence in Canadian Housing Markets.” Poster session for Bank of Canada Undergraduate Paper Award finalists, Sixtieth Annual Canadian Economics Association Conference, Simon Fraser University, Vancouver, Canada, May 2026.

2. “Canadian Housing Observatory: Exuberance Detection and Monitoring.” Contributed talk, Fourteenth Annual Canadian Statistical Society Student Conference, McMaster University, Hamilton, Canada, May 2026.
3. “Variance Reduction via Change-of-Measure in Monte Carlo Simulations for Option Pricing.” Seminar presentation, Fields Institute Undergraduate Summer Research Program, University of Ottawa, Ottawa, Canada, June 2024.

Awards

Finalist (one of nine), Bank of Canada Undergraduate Paper Award	2026
Undergraduate Research Scholarship (CAD 6,500), University of Ottawa, Faculty of Science	2025
Undergraduate Research Scholarship (CAD 5,000), University of Ottawa, Faculty of Science	2024
Admission Scholarship (CAD 3,000), University of Ottawa	2024
Dean’s Honours List, University of Ottawa	2024, 2025

Technical Skills

Languages:	R, Stata, Python, Julia, SAS, SQL, C++, TypeScript, LaTeX
Libraries:	NumPy, SciPy, PyTorch, pandas, tidyverse, R Shiny, DuckDB, Arrow
Tools:	Git, GitHub Actions, Docker, SSH, ArcGIS Pro
Environments:	Linux (Ubuntu/Debian/Fedora), Jupyter, RStudio, VS Code, Vim

Community Involvement

Director of IT, Economics Student Association	August 2026–Present
Community Coordinator, uOttaHack	September 2025–January 2026

Other

OFSAA Provincial Championships, Top 20 Finalist in 200m Men’s Medley Relay	March 2024