Miguel Biron Lattes

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https://miguelbiron.github.io/

Education

2018–present **Ph.D. Statistics**, *University of British Columbia*, Vancouver, BC.
supervisors: Drs. Alexandre Bouchard-Côté & Trevor Campbell

2014–2015 **M.A. Statistics**, *Columbia University*, New York, NY.
project: Analyzing call center data using self-exciting point processes

2006–2012 **B.Eng.Sc. Industrial Engineering**, *University of Chile*, Santiago, Chile.
supervisors: Drs. José Miguel Cruz & Cristián Bravo
note: Considers also a professional degree in Industrial Engineering

Academic Experience

2019–present **Research Assistant**, *UBC Statistics*, Vancouver, Canada.
Supervised by Alexandre Bouchard-Côté & Trevor Campbell.

2019–2020 **Teaching Assistant**, *UBC Statistics*, Vancouver, Canada.
- STAT 251 — Elementary Statistics
- STAT 302 — Introduction to Probability
- STAT 450 — Case Studies in Statistics

Publications

2019 **Biron, M.**, Córdova, F., & Lemus, A. *Banks business model and credit supply in Chile: the role of a state-owned bank*. BIS Working Paper No 800.

2018 **Biron, M.**, and Medina, V. *Leveraging Probability of Default Models for Bayesian Inference of Default Correlations*. Paper presented at the Conference on Business Analytics in Finance and Industry (BAFI), University of Chile, Santiago, Chile.

2014 **Biron, M.**, & Bravo, C. On the discriminative power of credit scoring systems trained on independent samples. In *Data Analysis, Machine Learning and Knowledge Discovery* (pp. 247-254). Springer International Publishing.

Honors

2018 **Anona Thorne and Takao Tanabe Graduate Entrance Scholarship**, *Department of Statistics, UBC*.

2018–2021 **Four year doctoral fellowship (4YF)**, *UBC*.
Provided with financial support of at least $18,200 per year plus tuition for up to four years of their doctoral studies

2014 **Becas Chile Scholarship**, *CONICYT*.
For graduate studies abroad (ranked 42 out of 408 recipients and out of 1,384 valid applications)

2006–2010 **Dean's list**, *University of Chile (FCFM)*.
For obtaining a GPA of 5.7 or above (scale ranges from 1 to 7).

Conferences and seminars

Presentations

Oct-2019 **Composites Research Network + Data Science Institute Research Talks**, *UBC*.
Debiasing Monte Carlo Estimators

2018–present **Multiple Reading Groups**, *UBC*.
Regular presentations at groups headed by Drs. Benjamin Bloem-Reddy, Alexandre Bouchard-Côté & Trevor Campbell.

2018 **Conference on Business Analytics in Finance and Industry (BAFI)**, *Santiago, Chile*.
Leveraging Probability of Default Models for Bayesian Inference of Default Correlations

Organization

2020–present **Constance van Eeden Student Seminar**, *UBC*.

Professional Experience

2019–2020 **Senior consultant**, *Applied Statistics and Data Science Group*, UBC.
In charge of organizing and holding meetings with clients, and supervising the work of a junior consultant responsible of writing a summary report with our recommendations. Notable projects:
- Prior Clinical Presentations and Service use Patterns as Predictors of Mortality in The Hotel Study Participants during the 10-year period of Observation
- Association between timetosurgery and survival rates of breast cancer patients
- Assessing reliability of the Heckmatt scale for ultrasound-visualized spasticity-related fibrosis
- Characterizing brain metastases arising from head and neck cancer
- Evaluation of Wood-Cement Composites Made with Contaminated Wood Waste
- Analyzing glaucoma-related patient outcomes after anti-VEGF therapy
- COPD originates in polluted air: controlled human exposure study to diesel exhaust in COPD

2015–2018 **Financial Stability Analyst**, *Superintendency of Banks and Financial Institutions*, Santiago, Chile.
I spent most of my time producing monthly reports with insights regarding potential threats to the financial stability of the banking system. This required processing massive databases with account-level data collected from banks (using SQL) for then analyzing them (using R). I also conducted applied research on the topic of financial stability. Some notable projects:
- Developing a method for Bayesian inference of default correlations by leveraging probability of default (PD) models
- Building a systemic risk indicator for retail loans using account-level and macroeconomic data
- Comparing the performance of statistical learning models for credit scoring
- Estimating the joint distribution of implicit bank PDs from market transactions of time deposits

2011–2014 **Financial Engineering Analyst**, *CL Group Financial Services Consulting*, Santiago, Chile.
I was the lead analyst in a wide array of projects involving quantitative modelling of market and credit risk. Clients were financial institutions, mostly banks. Some notable projects were:
- Quantifying counterparty credit risk exposure of an interest rate swaps portfolio
- Developing the market risk framework for a Central Counterparty of OTC derivatives
- Assessing the credit risk exposure of a government-backed portfolio of student loans
- Constructing PD models at many banks for credit risk management

Technical Experience (in decreasing order of proficiency)

programming R, C/C++, SQL, Julia, Stan, Python, MATLAB, Java, Visual Basic
documenting LaTeX, Jupyter Notebooks, R Markdown, Microsoft Word
others Git, Oracle, Sybase IQ, Microsoft SQL Server, Microsoft Excel

Last updated: March 9, 2021