

Miguel Biron Lattes

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Education

- 2014–2015 **M.A. in 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.
advisors: José Miguel Cruz, Cristián Bravo
note: Considers also a professional degree in Industrial Engineering

Experience

- 2015–Present **Financial Stability Analyst**, *Superintendency of Banks and Financial Institutions*, Santiago, Chile.
I spend half of my time producing monthly reports with insights regarding potential threats to the financial stability. This requires analyzing massive databases with account-level data collected from banks. I also conduct applied research relevant to 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 fixed income securities
- 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 behavioral credit scoring systems for estimating expected losses per client

Publications

- 2017 Biron, M., & Medina, V. *Leveraging Probability of Default Models for Bayesian Inference of Default Correlations*. Manuscript submitted for publication.
- 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.

Technical Experience

Proficient With

- languages R, SQL, \LaTeX , Stan, R Markdown
- technologies Oracle, Sybase IQ, Microsoft SQL Server, Microsoft Excel

Have Experience With

languages Python, MATLAB, Java, Visual Basic
technologies Git, Jupyter Notebooks

Relevant Coursework

Columbia University

statistics Data Mining, Bayesian Statistics, Non-parametric Statistics, Stochastic Processes for Finance, Multivariate Statistical Inference

University of Chile

industrial Introduction to Data Mining, Operations Research, Financial Engineering, Statistical
engineering Methods for Economics

computer Algorithms and Data Structures, Computing I (using Java)
science

mathematics Probability, Statistics, Linear Algebra, Optimization, Numerical Methods (using MATLAB),
Multivariate Calculus

physics Dynamical Systems, Statistical Physics

Honors

dean's list From 2006 to 2010 at University of Chile

scholarships Becas Chile 2014 scholarship for graduate studies abroad (ranked 42 out of 408 recipients
and out of 1,384 valid applications)