Sean Devine

BEHAVIOURAL DATA SCIENTIST

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Fully Bilingual: English, French

Summary

Cognitive Scientist (PhD McGill University) and Behavioural Scientist

Education

McGill University — Montreal, Canada
Ph.D. In Experimental Psychology (Cognitive Science) — 2020-2024

Concordia University — Montreal, Canada
Master Of Experimental Psychology — 2020

Concordia University — Montreal, Canada
Bachelor Of Psychology — 2018

Experience

Behavioural Scientist — IntactLab
Internship — (Intact Insurance)
2023-2024

- Developed behavioural interventions to solve both client-facing and employee business problems
- Leveraged AI (PyTorch, XGBOOST) models for topic modeling, risk prediction, and sentiment analysis
- Analyzed large data sources to simulate business path success likelihood
- Designed scientific experiments to test new products and ideas
- Introduced new statistical techniques (e.g., Bayesian analysis) into industry
- Developed new analysis pipelines and integrated with existing dashboards (PowerBI)

Otto Lab — McGill University
Ph.D. Student (supervisor: Dr. Ross Otto) — 2020-2024

- Designed numerous experiments, using Python, JavaScript, and MATLAB (including backend with SQL and PostgreSQL)
- Analyzed experimental and large-scale consumer data
- Fit computational and deep learning models to empirical data
- Published results in high-impact, peer-reviewed, journals
- Presented results at multiples international conferences
- Led multiple workshops, teaching colleagues and students advanced statistical techniques

Lifespan Decision-Making Lab — Concordia University
Masters Student and Research Coordinator (supervisor: Dr. Ross Otto) — 2018-2020

- Designed numerous experiments, using Python, JavaScript, and MATLAB
- Analyzed experimental data, resulting in the completion of a master's thesis and defence
- Fit computational models to empirical data
- Published results in high-impact, peer-reviewed, journals
- Presented results at multiples international conferences
- Digitized pre-existing paper-and-pencil experiments, implementing open science best practices

Other Work and Extracurricular Experience

Teaching Assistantships

Introduction to Statistics — 2020-2022
McGill University

Statistics for Experimental Design — *2021*
McGill University

Statistical Analysis I — *2020*
Concordia University

Editorial Activities—Reviewer

I have reviewed articles for the following journals: Perspectives in Psychological Science, Cognitive, Affective, & Behavioural Neuroscience, Cognition, Royal Society for Open Science, Advances in Cognitive Science, and the Journal of Trial and Error.

Additional Training

Deep Learning Certification 2021
Neuromatch Academy

Leadership

Led Workshops

Introduction to Hierarchical Drift Diffusion Modeling Feb 2024
Rabound University

Introduction to Reinforcement Learning Feb 2024
Rabound University

Bayesian Statistics for A/B Tests Jan 2024
IntactLab

Introduction to Bayesian Statistics June 2023
IntactLab

Introduction to Data Science [Series] Nov-Dec 2022
McGill University

Introduction to Bayesian Statistics March 2022
Concordia University | shorturl.at/dfsR6

Maximum Likelihood Estimation in R October 2022
Concordia and McGill Universities | https://github.com/seandamiandevine/MLEWorkshop

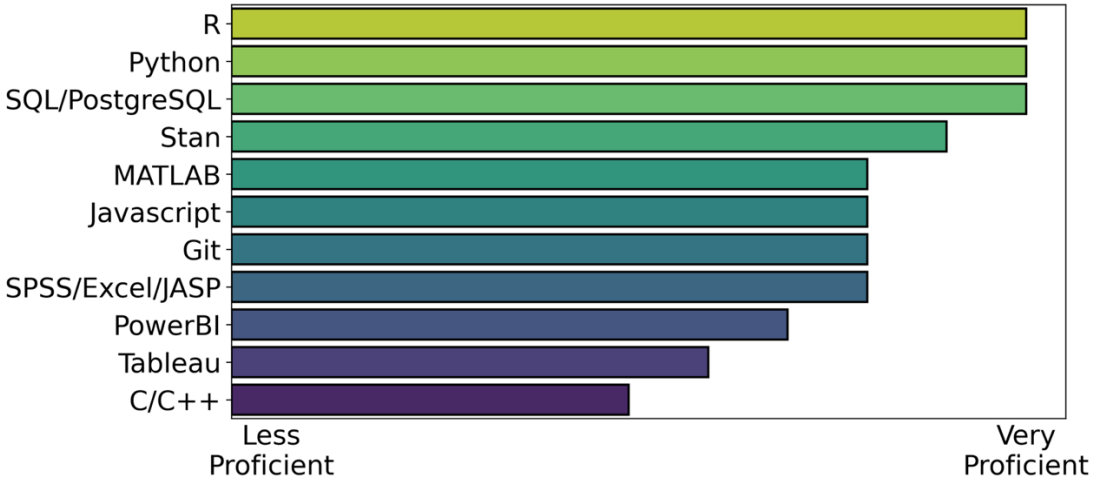
Multilevel Modeling: Basic and Advanced Topics June-July 2021
Concordia and McGill Universities | https://github.com/seandamiandevine/MLMTutorial_2021

Programming Experiments Online April 2022
Concordia, McGill, and TU Dresden Universities

Python for Psychologists April 2020
Concordia University

Professional Skills

Programming Languages



Articles and Conferences

I have authored numerous research articles in internationally-recognized peer-reviewed journals and presented at many international conferences. Here is a short list of recently published articles, which I think highlight some of my competencies in data science and science communication. To see the full list, see https://seandevine.org/homepage_files/cv_long.pdf.

- Devine, S., Germain, N., Ehrlich, S., & Eppinger, B. (2022). Changes in the Prevalence of Thin Bodies Bias Young Women's Judgments About Body Size. *Psychological Science, 33*(8), 1212-1225. https://doi.org/10.1177/09567976221082941
- Otto A.R., Devine, S., Bornstein, A.M., & Louie, K. (2022). Context-dependent choice and evaluation in real-world consumer behavior. *Scientific Reports, 12*, 17744. https://www.nature.com/articles/s41598-022-22416-5
- Devine, S., Otto, A. R., Uanhoro, J. O., & Flake, J. K (under review). A Tutorial for Quantifying Within- and Between-Participant Variance in Multilevel Logistic Models. Advances in Methods and Practices in Psychological Science. https://doi.org/10.31234/osf.io/v68wb