# Sean Devine

BEHAVIOURAL DATA SCIENTIST

*McGill University, 2001 McGill College, H3A 1G1, QC, Canada*

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Fully Bilingual: English, French

## Summary

PhD Student in Cognitive Science at McGill University and Behavioural Scientist at Intact Insurance

## 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-Present

- 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-Present

- 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

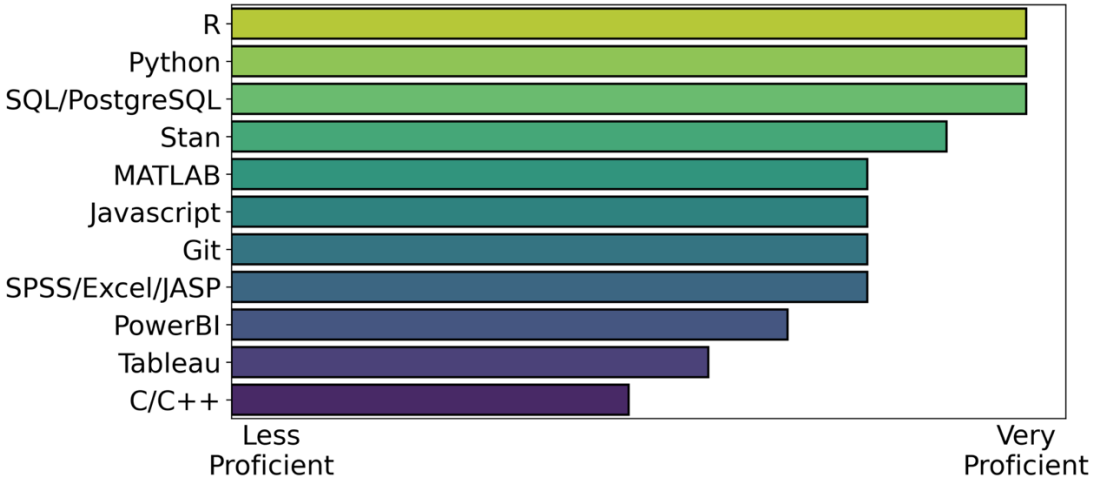
**Multilevel Modeling: Basic and Advanced Topics** June-July 2021
Concordia and McGill Universities | https://github.com/seandamiandevine/MLMTutorial_2021

**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