# Sean Devine

### BEHAVIOURAL SCIENTIST

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## Summary\_

Cognitive Scientist (PhD McGill University) and Behavioural Science Fellow at Impact Canada.

## Education

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

Montreal, Canada Concordia University

Master Of Experimental Psychology Montreal, Canada Concordia University

Bachelor Of Psychology  $Experience_{-}$ 

#### Impact Canada Behavioural Science Fellow

- Developed behavioural science-supported solutions to public health issues facing Canadian citizens - Worked closely with the Public Health Agency of Canada to design, test, and implement an intervention aimed at

promoting healthy behaviours among Canadians.

- Consulted on statistics and research-method based training across departments.

Impact and Innovation Unit & Public Health Agency of Canada

2024-Present

2023-2024

2018

**Behavioural Scientist** IntactLab

Internship (Intact Insurance)

- 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)

McGill University

2020-2024 Otto Lab

Ph.D. Student (supervisor: Dr. Ross Otto)

- 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

Masters Student and Research Coordinator (supervisor: Dr. Ross Otto)

Concordia University

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

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

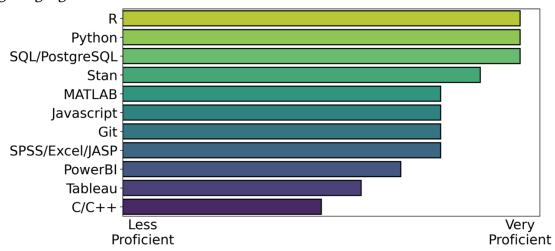
Python for Psychologists

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 <a href="https://seandevine.org/homepage\_files/cv\_long.pdf">https://seandevine.org/homepage\_files/cv\_long.pdf</a>.

- 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. <a href="https://doi.org/10.31234/osf.io/v68wb">https://doi.org/10.31234/osf.io/v68wb</a>