

David St-Amand
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Summary

I am currently finishing my master in Neuroscience at McGill where I combine electrophysiology with machine learning to better understand the receptive fields of V1 neurons. I have graduated from the Honours psychology program at McGill in Spring 2017, in which I got my first paper published. My passion for understanding new ideas allowed me to get good backgrounds in both statistics and machine learning. I am very comfortable programming in both R and python.

Publications

- St-Amand, D., Sheldon, S., & Otto, A. R. (2018). Modulating episodic memory alters risk preference during decision-making. *Journal of cognitive neuroscience*, 30(10), 1433-1441.

Current research

Master degree: Integrate Program in Neuroscience, McGill University. 2017-current.
Research supervisor: Dr. Curtis Baker.

- On-inhibition underlies stronger V1 responses to dark

Past research experience

Undergraduate Honors Research: Department of Psychology, McGill University, 2016-2017. Research supervisor: Dr. Ross Otto.

- Effect of episodic memory on risky decision-making

Research assistant position: Department of Psychology, McGill University, 2015-2016.
Research supervisor: Dr. David Ostry.

- Study of the structure and acquisition of sensorimotor maps

Undergraduate Honors Research: Department of Psychology, McGill University, 2015-2016. Research supervisor: Dr. Jennifer Bartz.

- Investigation of the effect of stress on empathy in men and women

Employment History

Past:

Research Assistant (SURA): from May 2017 to September 2017

Motor Neuroscience Lab (McGill University), Montreal, Québec

Tutor for psychological statistics (PSYC 305 and PSYC 204): from September 2016 to January 2018

McGill University, Montreal, Québec

Research Assistant: from May 2016 to September 2016

Motor Neuroscience Lab (McGill University), Montreal, Québec

Receptionist: from August 2012 to August 2014

Séminaire Saint-Joseph, Trois-Rivières, Québec

Skills

Statistics:

My curiosity led me to develop a good mathematical understanding of how statistics work. I've learned the fundamentals behind statistical theory and multivariate linear analysis, which grants me a good intuition of when to apply the right methods. I can also apply more complex statistical analyses (e.g. linear mixed models and logistic regression).

Machine learning:

The foundation of my knowledge in machine learning comes from taking a graduate-level applied machine learning class at McGill. I have improved on those during my master's degree, where I got extensive experience using TensorFlow in python.

Programming:

R: Advanced.

R is the main programming language I use for data analysis, statistics and plotting. I have been using R since Summer 2016 and am now very comfortable with it. I have given R workshops to graduate students in both Summer 2018 and Summer 2019.

Python: Advanced.

I mostly use Python for machine learning (in Tensorflow) and data pipelines. I have a versatile understanding of the language and am comfortable finding online resources (e.g. packages and functions) when facing novel problems.

Java: Beginner.

I have first learned how to program in Java, by taking an introductory class to programming in September 2014. I have not used Java since, but this class sparked my interest in programming and taught me the basics of it (such as loops, if-statements function-oriented and object-oriented programming).

Education

McGill University, Montréal, Québec

Master's degree in Neuroscience: *In progress*

McGill University, Montréal, Québec

Honors Psychology: *Graduated*

Collège Laflèche, Trois-Rivières, Québec

Sciences de la nature – Cheminement baccalauréat international : *Graduated*

Languages

English: Fluent

French: Native