

Aaron Sossin
Undergraduate
Student

Montreal, QC
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Skills

Java, Python (sklearn, pytorch, tensorflow), C, C#, Javascript, Matlab, OCaml, Bonsai, Unity, bash, git, Arduino, sql
Machine Learning and Machine Vision
Mouse handling and surgeries
English & French

Experience

Douglas Mental Health University Institute / Research Assistant

November 2017 - April 2019, Montreal, QC

Using *in vivo* techniques with neural data analysis to better understand how neuronal circuits in the hippocampus encode contextual memories and their causal role in fear discrimination

Writing post-hoc analysis and automated experimental control algorithms in Matlab, Python and Bonsai

*Co-author of SFN posters on remapping in the hippocampus^{3,4}

McGill University / Research Assistant

May 2019 - Present, Montreal, QC

Creating a 3D Genome Viewer in VR (virtual reality) by modelling genomic information using Unity and C#

*Co-author of publication submitted in the Journal of Bioinformatics²

Concordia University / Research Assistant

May 2016 - September 2016, Montreal, QC

Investigation of chiral interactions between molecules of interest using HPLC, Mass Spectrometry, and ITC

*Co-author of publication in the Journal of Chemical Communications¹

McGill University / Teaching Assistant

August 2019 - April 2019, Montreal, QC

Providing learning support for students, holding office hours, grading tests, and administrative work for COMP303 (Software Design)

Pharmahackathon / Software Development

November 2018, Montreal, Qc

Analyzing FASTA sequences to classify and examine oncogenic mutations in genes of interest using Java

2nd Place Prize

Madagascar Research and Conservation Institute / Forest Researcher

June 2017 - July 2017, Madagascar

Forest conservation efforts including data collection and analysis

Education

Stanford University / Biomedical Informatics Masters

Starting in Fall 2020

McGill University / Major Neuroscience, Minor Computer Science

September 2017- Present, Montreal, QC

3.95 GPA (on a 4.0 scale)

Marianopolis Cegep / Honours Pure and Applied Sciences

August 2015 - May 2017, Montreal, QC

37.0 R Score, Dean's Honours List, Marianopolis Scholar

Extra-Curricular

McGill Intramural Basketball (Self proclaimed team MVP)

Hackathons

Wine and Cheese Reviewer

Marianopolis Reach for the Top Team (VP finance), provincial champions

Marianopolis Tennis Team (co-president)

Research Journal Club

Publications

1) Nguyen, Thi Phuong Thao, et al. "Directing the Viedma ripening of ethylenediammonium sulfate using "Tailor-made" chiral additives." *Chemical Communications* 52.85 (2016): 12626-12629.

2) 3DGV: Simple Exploration of 3D Genome Structures using Virtual Reality. Éric Zhang 1,†, Chris Drogaris 1,†, Antoine Gédon 1, Aaron Sossin 1, Rajae Faraj 1, Yan Cyr 2, Jacek Majewski 3, Mathieu Blanchette 1, Jérôme Waldispühl 1
<http://csb.cs.mcgill.ca/3dgv/>

3) R. R. ROZESKE, L. RUNTZ, A. T. KEINATH, A. SOSSIN, M. P. BRANDON;

Psychiatry, McGill Univ., Montreal, QC, Canada. Examination of non-spatially tuned hippocampal neurons in a context fear discrimination task. Program No. 164.10. 2019 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2019. Online.

4) L. RUNTZ, R. R. ROZESKE, A. T. KEINATH, A. SOSSIN, M. P. BRANDON;

Dept. of Psychiatry, McGill Univ., Montreal, QC, Canada. Linking hippocampal remapping to memory retrieval in a context fear teleportation task. Program No. 164.11. 2019 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2019. Online.

Independent Research Project

The Effects of Gradual Transitions Between Neutral and Dangerous Contexts on ventral CA1 Pyramidal Neurons in Mice

- Aaron Sossin, Léonie Runtz, Robert R. Rozeske and Mark P. Brandon