

# NICOLAS VIULET

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## EDUCATION

### MCMASTER UNIVERSITY

*Master of Science (MSc)*

Sep. 2025 — Ongoing  
Hamilton, ON

- **Program:** Neuroscience
- **Thesis:** Investigating the relationship between intracortical myelin and major depressive disorder (MDD).
- **Thesis Supervisor:** Dr. Nicholas Bock
- **Selected Coursework:** Statistical Methods in Neuroscience

### UNIVERSITY OF TORONTO

*Honours Bachelor of Science (HBS)*

Sep. 2021 — Jun. 2025  
Toronto, ON

- **Program:** Neuroscience Specialist Major | Buddhism, Psychology, and Mental Health Minor
- **Cumulative GPA:** 3.71
- **Thesis:** Acute Functional Brain Changes Associated with Psilocybin in Depression: a protocol for a systematic review and meta-analysis
- **Thesis Supervisor:** Dr. Sean Nestor
- **Selected Coursework:** Clinical Neuroimaging; Synapse Neurobiology; Neurobiology of Behaviour; Neuroanatomy; Advanced Research in Meditation, Psychology & Neuroscience; Ethics in Emerging Technology

## ACADEMIC AND RESEARCH AWARDS

- *Total Award Value: \$4,435*
  - Dean's List Scholar in the Faculty of Arts & Science (2023, 2025)
  - James Morrow Scholarship (2023)
  - The Dr. Lorus J. Milne and Dr. Margery J. Milne Research Award (2025)
  - Lincoln Hutton Essay Prize: Sciences (2025)

## RESEARCH INVOLVEMENT

### Embodiment, Attention, Sensation, Engagement (EASE) Lab

*Affiliated Researcher*

Jan. 2025 — Ongoing  
Toronto, ON

- Engaged in monthly meetings which aim to foster rigorous interdisciplinary research interactions between scientists, academics, health practitioners, and contemplative traditions.

### EMBRACE Project, Sunnybrook Health Sciences Centre

*Undergraduate Thesis Student (HMB496Y1: Research Project in Human Biology)*

Jul. 2024 — April 2025  
Toronto, ON

- Performed a comprehensive systematic literature search, adhering to Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines, using the OVID search engine to contribute to a systematic review, registered on PROSPERO, with two key aims:

(1) To determine any functional connectivity changes that occur in mood- and emotion-related brain networks from pre- to post-psilocybin in healthy versus depressed adults – consolidate the therapeutic targets of psilocybin on a region/network level in the brain of patients with major depressive disorder (MDD).

(2) To supplement the Engaging Mood Brain Circuits with Psilocybin (EMBRACE) clinical trial in support of our a-priori regions (sgACC, dlPFC) of interest within mood-related networks (salience, DMN, etc.)

- Worked with PhD, MSc, and HBSec students to compile functional imaging data, regarding the impact of psilocybin on major depression and healthy controls, for a neuroimaging meta-analysis using activation likelihood estimation (ALE).
- Used multiple collaborative platforms such as Zoom, Covidence, Microsoft SharePoint, and Slack to effectively communicate and work with peers.

### **The BOLD lab, University of Toronto**

Aug. 2023 — Aug. 2025

*Undergraduate Research Assistant (Volunteering and Work Study Contract)*

*Toronto, ON*

- Worked on the REF (Reading Development in Resettled Refugees) project with PhD, MSc, and HBSec students in the BOLD lab at the Ontario Institute for Studies in Education (OISE).
- Facilitated data collection of functional neural activity using the fNIRS (functional near-infrared spectroscopy) system on an ongoing cohort of about 120 participants.
- Administered English Language behavioural measures, using various standardized language psychometric tests on an ongoing cohort of about 120 participants; collected with REDCap.
- Facilitated data collection, using REDCap, of English Language behavioural measures using various standardized language psychometric tests and fNIRS data for the REF2-pilot and REF2 study which includes an expanding cohort of Dari and Pashto-speaking families.
- Facilitated the cleaning of data collected through psychometric tests.
- Maintained the BOLD Lab website by consistently updating publications and poster presentations.
- Trained new research assistants in data collection; explained and demonstrated both English Behavioural and fNIRS protocols.
- Used Python to write various scripts for data organization.
- Used multiple collaborative platforms such as MS SharePoint, MS Teams, and Slack to effectively communicate with peers.

## **ACADEMIC PRODUCTIVITY**

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### **PUBLICATIONS**

*Submitted, Under Review*

1. Viulet, N. OCD and Predictive Processing: Remediating Reduced Self-Confidence and Negative Affect with Meditation. *SPARK Health Student Journal*

*Published*

2. Viulet, N. (2023, December 11<sup>th</sup>). Effects of Aerobic Exercise on the Brain: Benefits of Aerobic Exercise for Parkinson's Disease Patients. *Project Wellness Student Journal*, (4), 36-44. <https://heyzine.com/flip-book/6704ae2bbe.html#page/37>

### **POSTER PRESENTATIONS**

1. Poulin, J., Viulet, N., Liu, A., MacIntosh, B., Nestor, S. Acute Functional Brain Changes Associated with Psilocybin in Healthy Adults and Depression: A systematic review and meta-analysis. *SRI (Sunnybrook Research Institute) Research Day* (2025, July)

2. Poulin, J., Viulet, N., Liu, A., MacIntosh, B., Nestor, S. Acute Functional Brain Changes Associated with Psilocybin in Healthy Adults and Depression: A systematic review and meta-analysis. *University of Toronto Department of Psychiatry Research Day* (2025, June)
3. Viulet, N. Magic Mushrooms: A New Frontier in Mental Health. *Victoria College Research Day*. Toronto, ON. (2025, March).

## PROFESSIONAL EXPERIENCES

**Psychology, Neuroscience, and Behaviour Department, McMaster University** Sep. 2025 — Ongoing  
*Neuroanatomy & Neurophysiology (PNB 2XB3) Teaching Assistant* Hamilton, ON

- Worked under the supervision of Dr. Daniel Goldreich to mark and provide feedback to students through course assignments.
- Provided mentorship and facilitated knowledge transfer for undergraduate students by answering coursework related questions through email and in-person.

**The Keg Steakhouse & Bar** Jun. 2023 — Sep. 2025  
*Busser, Barback, and Server*  
 Toronto, ON

- Coordinated with servers, bartenders, and kitchen staff to ensure smooth service and provide an exceptional customer experience.
- Managed time effectively and showed an understanding of fine-dining etiquette to complete various tasks (restocking liquor, clearing tables etc.,) under pressure.
- Taught new staff in similar roles and worked with staff and customers within a range of socioeconomic backgrounds.

**Michigan Healthcare Academy (MHA)** Jun. 2022 – Apr. 2023  
*CNA (Certified Nurse Assistant) Teaching Assistant* Mt. Clemens, MI

- Achieved nurse assistant certification in Michigan then taught other nurse assistant students pertinent skills to acquire their own nurse assistant certifications.
- Facilitated and demonstrated nursing assistant skills such as washing the perineal area, taking vitals, locomoting residents, dealing with patients with neurological conditions et cetera.
- Learned how to better interact with a varied demographic of people, teach effectively, and work in a healthcare environment.
- Collaborated with other TAs and senior teachers to facilitate lesson planning and skill demonstration setup.

## EXTRACURRICULAR INVOLVEMENT

**Student of the MiNDS Association (SOMA)** Sep. 2025 — Ongoing  
*Events Team Executive Member* Hamilton, ON

- Managed event planning for the Neuroscience Graduate Students' Union (SOMA), overseeing venue logistics, team coordination, and budget management to support community engagement initiatives.

**Buddhism Psychology Student Union (BPSU)** Apr. 2024 — Aug. 2025  
*Treasurer* Toronto, ON

- Managed club finances for the 2024-2025 academic year by effectively using Google sheets to collaborate with other executives.

- Managed a \$4,000 CAD budget and allocated these funds across academic and social events over the fall and winter semesters.
- Facilitated event planning and setup via collaboration with fellow executive members resulting in engaging events including two academic seminars along with a plethora of social events which fostered interdisciplinary community engagement amongst students.
- Managed the BPSU bank account and collected receipts for all club transactions leading to an efficient allocation of funds provided by the Arts and Sciences Student Union (ASSU).

### Ask An Undergrad – UofT Student Chapter

Jan. 2024 — Apr. 2025

*Mentor*

*Toronto, ON*

- Facilitated coffee chats to provide first-year students with the necessary information to effectively transition into post-secondary education by providing mentorship support and resources to effectively plan for undergraduate studies.

### Neurological and Neurodegenerative Disease Student Association (NANSA)

Nov. 2023 — Apr. 2024

*Mentor*

*Toronto, ON*

- Mentored first and second-year undergraduate students interested in the Neuroscience major or specialist program at U of T via communication through emails and in-person meetings.
- Provided key resources for lower-year students related to research positions, research funding, extracurricular opportunities, academic support, and exploration of career opportunities.

## SKILLS AND CERTIFICATIONS

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### Healthcare

- Oxygen Therapy — *Canadian Red Cross* (ID: 104320537)
- Airway Management — *Canadian Red Cross* (ID: 104320535)
- Standard First Aid CPR/AED Level C — *Canadian Red Cross* (ID: 104320535)

### Research & Ethics

- Responsible Conduct of Research (RCR) — *CITI Program* (ID: 68697823)
- Biomedical Research Ethics Tutorial — *CITI Program* (ID: 57746125)
- Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2) — (ID: 00014199954)
- Health Canada Division 5: Drugs for Clinical Trials Involving Human Subjects — *CITI Program* (ID: 68697824)
- Good Clinical Practice (GCP) — *CITI Program* (ID: 68697822)

### Technical Skills

- **Programming & Software:** Python, R, MATLAB, HTML, REDCap
- **Neuroimaging Research Experience:** FSL, FreeSurfer, ITK-SNAP, fNIRS (training and data collection), MRI (analysis)
- **Neuroimaging Coursework Experience:** DTI & fMRI (theoretical knowledge and preprocessing steps)

### Languages

- English (fluent)
- Romanian (fluent)

