Emmanuelle Coutu-Nadeau, B.Sc., B.Eng.

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Education

Master of Sciences, Psychology – *Université de Montréal* (GPA: 4.2 / 4.3) — 2024 – Present (*expected 08/26*)
Bachelor of Software Engineering – *McGill University* (GPA: 3.7 / 4) — 2018 – 2022
Bachelor of Science, Psychology (Honours) – *McGill University* (GPA: 3.8 / 4) — 2015 – 2018

Work Experience

Product Owner & Project Manager – *CareSimple* — 2022 – 2025
- Led CHUM's research project as primary client contact; coordinated clinical and technical teams to implement remote patient monitoring (RPM) for liver transplant patients.
- Translated client needs into technical specs for a digital health platform in the Swedish market.
- Managed compliance documentation for Canadian and European health regulations.
- Prototyped KPI reporting and analytics tools (Python, SQL) to support data-driven decisions.

Software Developer – *CareSimple* — 2020 – 2022
- Developed features in a web-based portal for clinicians to perform RPM (React, TypeScript).

Data Science Intern – *CareSimple* — 2019
- Analyzed patient health data using R and Python.
- Developed a preprocessing pipeline to standardize data for artificial intelligence algorithms.

Research Experience

Neurosciences of Early Development Lab – *CHU Ste-Justine (CRHSJ)* — 2024 – Present
- <u>Master's Thesis:</u> AI-driven analysis of EEG biomarkers in autistic children with and without known genetic variants.
- Led the redesign of the lab's database to improve scalability, integrity, and cross-study usability.
- Conducted pilot data analyses using Python and R (ANCOVA, SNR, HAPPE); collaborated with geneticists and neuropsychologists.
- Performed EEG and neuropsychological assessments on children with ASD and pediatric cancer.

Marc O. Martel's Pain Lab – *McGill University (MUHC)* — 2016 – 2019
- **Honours Thesis:** Association between perceived injustice and prescription opioid misuse through opioid craving.
- Conducted structured clinical interviews, data collection, and saliva sampling.

Volunteering Experience

Student Affairs Committee – *UNIQUE* — 2025 – Present
- Contributed to the UNIQUE Student Affairs Committee, supporting and empowering students at the intersection of Neuroscience and AI in Quebec.

Software Development & Business Strategy Mentor – *Technovation* — 2024 – Present
- Mentored girls (ages 8–18) in mobile app prototyping and business plan development to address UN Sustainable Development Goals.

Event Ambassador – *Fondation du MAC* — 2024
- Promoted for *Printemps du MAC*, an initiative supporting the museum through fundraising events.

Academic Awards & Scholarships

- Neuro-AI UNIQUE Excellence Scholarship (10,000 $) — 2025 – 2026
- MES Bourses de persévérance TI (3,000 $) — 2022
- Airbus Scholarship in Engineering (1,500 $) — 2021
- First-class Honours — 2018

Skills

- **Languages:** Fluent in English and French (spoken and written).
- **Programming & Data Analysis:** Python, Java, C, MATLAB, React, TypeScript, R, SQL, Power BI, Excel, AI/ML.
- **Presentations:** Experience delivering client presentations using PowerPoint.
- **Certifications:** PSPO I, HIPAA, GDPR, Cybersecurity training, Centre for Suicide Prevention, & Leading Change in Health Informatics (John Hopkins University).

Peer-Reviewed Publication

Verner, Maria MSc; Sirois, Amanda BSc; Coutu-Nadeau, Emmanuelle BSc; et al. *The Association Between Perceived Injustice and Opioid Craving in Patients With Chronic Pain.* Journal of Addiction Medicine, July 21, 2022.