Juan David Guerra

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 Montreal, Canada

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EDUCATION

MILA - Quebec AI Institute & Polytechnique Montréal — Montreal, QC
M.A.Sc Software Engineering — *Sep 2024 - May 2026*
- **Cumulative GPA:** N/A
- **Principal Investigator:** Marco Bonizzato - Polytechnique Montréal Department of Biomedical Engineering
- **Research Area:** Hierarchical Gaussian Processes and other ML techniques with applications to Neuroprosthetics

McGill University — Montreal, QC
B.Sc. First-Class Honours Computer Science with a Minor in Neuroscience — *Sep 2020 - May 2024*
- **Cumulative GPA:** 3.73 / 4.0
- **Relevant Coursework:** Honours Thesis in Computer Science; Reinforcement Learning; NLP; Statistics; Artificial Intelligence; Applied Machine Learning; Honours Algorithms & Data Structures; Discrete Math;
- **Prizes and Awards:** Quebec Excellence Bursary for Computer Science (2021);

Upper Canada College — Toronto, ON
International Baccalaureate Diploma & Ontario Secondary School Diploma — *Sep 2015 - May 2020*
- **Grade-Point Average:** 35 / 42 (IB) and 94% (OSSD)
- **Prizes and Awards:** Lang Scholar Prize for Athletic and Academic Achievement (2020); General Proficiency Award for Academic Standing (2019); Cayley Waterloo Math Contest Certificate of Distinction (2019);

OTHER RESEARCH EXPERIENCE

Department of Computer Science — Montreal, QC
McGill University, MILA - Quebec AI Institute — *June 2024 - Ongoing*
- Research collaborator at Professor Golnoosh Farnadi's EQUAL Lab
- Conducted an empirical, in-depth analysis of Large Language Models (LLMs) and their training dynamics

Department of Biomedical Engineering — Montreal, QC
McGill University, MILA - Quebec AI Institute — *February 2023 - Ongoing*
- Undergraduate researcher under the supervision of Professor Danilo Bzdok.
- Using machine learning models to take brain activation (fMRI) and human brains to predict and understand the task the subject was performing
- Libraries used: NIlearn; Numpy; Pandas; Matplotlib; Scikit learn.

Department of Physiology — Montreal, QC
McGill University — *June 2022 - February 2023*
- Working as a summer researcher and research assistant under the supervision of Professor Erik Cook
- Investigating correlations between visual stimuli and activation in mouse brains using statistical techniques and data processing
- Z-plane motion correction for two-photon imaging of neural activity in awake behaving mice

RELEVANT EXPERIENCE

Mental Health Director — Montreal, QC
McGill Science Undergraduate Society — *May 2021 - May 2024*
- Researching mental health issues, policies, and activities among North American Universities
- Organizing projects (e.g., mentorship programs) to improve students' mental health at McGill University

Technical Skills
Python; Java; MIPS; Matlab; C; Bash; Git; UNIX; OOP; Sci-Kit Learn; PyTorch; Pandas

Concentrations
Artificial Intelligence; Machine Learning; Applications of ML; Computational Neuroscience; Data Science