Updated Apr 2025

Max Mascini

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LINKS

LinkedIn, Github

PROFILE

First-class honours graduate in Neuroscience, with a strong foundation in brain-computer interfaces, EEG neuroimaging, and machine learning. Proficient in Python and R, with growing interests in machine learning/AI, cognitive science, and human-computer interaction. Experienced in mentoring, collaborative research, and technical communication. Eager to deepen expertise in computational approaches to brain and behavior through graduate studies.

EDUCATION

2024 — Halifax, NS

Bachelor of Science (Honours) in Neuroscience, Dalhousie University

- First-Class Honours; Dean's Scholar - cGPA: 4.01
- Thesis: *Offline Classification Evaluation of a Novel SSVEP and ERP Stimulation Method*

2024 — Halifax, NS

Certificate In Neurotechnology & Innovation, Dalhousie University

- Completed interdisciplinary coursework in neuroscience, entrepreneurship, business strategy, and technology commercialization
- Conducted data analysis on market research for a capstone project focused on developing a freeze-dried food startup, using consumer insights, competitor benchmarking, and pricing data to inform product strategy and business modeling

EMPLOYMENT HISTORY

Jun 2024 — Present — Halifax, NS

Research Assistant, Dalhousie Neurocognitive Imaging Lab

- Conducted brain-computer interface (BCI) research, including neural signal classification using Python-based ML models
- Analyzed and visualized neural data in Python and R, extracting features to inform model development
- Developed and implemented interactive experimental paradigms in PsychoPy with real-time EEG streaming
- Mentored student teams, supporting technical development and timely, well-documented project delivery
- Co-authored manuscripts to communicate findings effectively and support peer-reviewed publication efforts

Jun 2024 — Present — Halifax, NS

Neurotech Programming Specialist, SURGE Innovation

- Coordinated and facilitated technical workshops and hackathons for the Dalhousie NeuroTech Club, strengthening cross-disciplinary engagement and leadership in neurotechnology education
- Created educational resources that supported skill-building and project development, demonstrating a proactive approach and a can-do attitude

Apr 2023 — Sep 2023

Fundraising Team Leader, OXFAM Canada

Halifax, NS

- Led door-to-door fundraising teams, training and mentoring new fundraisers to maximize impact
- Built rapport with potential donors and handled objections effectively to enhance donor engagement, consistently achieving high performance targets

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TEACHING & MENTORING EXPERIENCE

Feb 2025 — Apr 2025

Research Supervisor - Dalhousie Integrated Science Program (DISP)

- Supervised a DISP student team on a research project involving steady-state visually evoked potentials for brain-computer interfaces
- Provided guidance on experimental design, data analysis, and presentation skills.

Sep 2024 — Apr 2025

Assistant Supervisor - Honours and 3rd Year Independent Study Students

- Supported honours and independent study students in the development and execution of their research projects
- Assisted with and provided feedback on paradigm design, data collection, and analysis
- Collaborated with primary supervisors to ensure student progress and engagement

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PUBLICATIONS & PRESENTATIONS

May 2023

"*Exploring Classification Techniques for a Novel EEG-based Bi-Hybrid BCI System"* - Poster presented at the Science Atlantic Psychology Undergraduate Student Research Conference

Mount Saint Vincent University, Halifax, NS

TECHNICAL SKILLS

Programming Languages:	Python, R, SQL
Frameworks & Libraries:	Scikit-learn, PyTorch, PsychoPy, MNE-Python, SciPy, Pandas, Matplotlib
Neurotechnology & Experimentation:	Brain-Computer Interfaces (SSVEP, ERP), MEG/EEG data acquisition & analysis, Experimental design, Visual stimulus presentation
Statistical & Data Analysis:	Hypothesis testing, Generalized linear models, Mixed-effects models, ANOVA, Repeated-measures analysis, Bootstrapping
Data Science & Machine Learning:	Signal processing, Feature extraction (Fourier, CCA), Signal classification, Time-series analysis, Data visualization