Yariv **Barsheshat**

Software Engineering · AI & Machine Learning · Solutions Architecture

(+1) 514-969-2748 | yariv@barsheshat.com | yarv | yarivbar

Experience

Independent AI Safety Researcher
Montréal, QC

Funded by Coefficient Giving — *Apr 2026 – Present*

- Conducting independent AI safety research in collaboration with Robert Graham, supported by a research grant from Coefficient Giving.
- Co-authored a research paper submitted to NeurIPS and ICML for the 2026 cycle; currently under peer review, with topic and abstract under embargo.

AI Full-Stack Engineer
Montréal, QC

Exploral — *Jan 2026 – Apr 2026*

- Contributed across the full stack to Estimai (www.estim.ai), a SaaS platform enabling construction estimators to generate bids on calls for tender by ingesting architectural plans and technical specs via AI-driven document analysis.
- Designed and single-handedly delivered a PoC for detecting and associating column icons across multi-page floor plans using vectorial detection algorithms on extracted PDF primitives.
- Helped shape technology and design decisions, balancing scalability, cost-efficiency, and rapid iteration for a cloud-deployed product.

Senior Research & Development Programmer
Montréal, QC

mtl.ai — *Aug 2022 – Jan 2026*

- Designed, trained, and deployed real-time computer-vision models for object detection and segmentation in live soccer broadcasts, powering ad replacement for UEFA Euro 2024 and Champions League.
- Identified and resolved key pipeline bottlenecks, achieving a 5× speedup in model validation and accelerating deployment cycles.
- Built a regional threshold-control feature giving operators fine-grained control over model behaviour, reducing recurring spatial errors during live broadcasts.
- Led development of a unified API abstraction library integrating frontier LLMs (OpenAI, Google, Anthropic) into a production marketplace assistant app, enabling rapid model swapping and cost optimization. (see www.tavendi.com)

Mathematics Professor
Montréal, QC

Dawson College — *Jun 2015 – Jul 2022*

- Taught calculus, linear algebra, statistics, and probability to thousands of students; developed course materials adopted department-wide. Executive council member on the Teachers' Union and Science Program Committee.

Education

McGill University
Montréal, QC

Master of Science in Mathematics — *2013 – 2015*

- Thesis: *Entropy in Dynamical Systems* — shortlisted for top Master's thesis in Mathematics.

McGill University
Montréal, QC

Bachelor of Science, Joint Honours in Mathematics and Physics — *2009 – 2012*

- Dean's Honour List — GPA 3.91

Skills

Languages	Python, C++, Kotlin, Java, SQL, HTML, LaTeX
Frameworks & Tools	PyTorch, OpenCV, CUDA, TensorRT, FastAPI, Pydantic, Docker, Git, Jira, Confluence
Architecture	REST API design, microservice architecture, CI/CD pipelines, cloud deployment
Spoken Languages	English (Native), French (Fluent), Hebrew (Fluent)

Selected Awards

2014, 2015	**NSERC Canada Graduate Scholarship**, Government of Canada	*McGill University*
2010, 2011	**NSERC Undergraduate Student Research Award**, Government of Canada	*McGill University*