

Thomas Mousseau

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SOFTWAREENGINEERING

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EDUCATION

POLYTECHNIQUE MONTRÉAL

Master's in Artificial Intelligence (M. Eng.)

September 2025 – May 2026

(Montréal, Canada)

POLYTECHNIQUE MONTRÉAL

Bachelor in Software Engineering (B. Eng.) with AI specialization

September 2021 – May 2025

(Montréal, Canada)

WORK EXPERIENCES

AIRY3D, Machine Learning Engineer Intern, Advanced Research Team

May 2025 - August 2025

- Enhanced vision foundation models by integrating temporal awareness for downstream tasks
- Established and implemented temporal-specific metrics for both training optimization and benchmark of Monocular Depth Estimation (MDE) models

CLINIA, Machine Learning Engineer Intern, R&D Team

May 2024 - August 2024

- Optimized embedder models, in a RAG context, by modifying their architecture
- Designed and developed a benchmarking project for multiple NLP models
- Utilized and contributed to NVIDIA Triton Inference Server and TensorRT repositories

PROJECTS / ACTIVITIES

ELECTRIC FSAE OF POLYTECHNIQUE, Python, C++ and ROS2

September 2023 - July 2025

- Technical Lead of the Driverless team
- Led cross-functional teams to integrate mechanical and electrical systems
- Designed and implemented the perception pipeline with cameras (Stereolab ZED X) and LiDAR (HESAI-AT128)
- Designed and implemented path planning algorithm autonomous system
- Built Model Predictive Controller (MPC) as the lateral controller of the autonomous vehicle
- Optimised code base to run using CUDA on Jetson Orin
- Created a telemetry system compatible with ROS2

HACKATHONS, Machine Learning & Web Development

2019 - To this day

- Won 2 Machine Learning Hackathons and participated in 3 more

SKILLS

- **Programming/scripting languages:** Python, C++, Rust, Terraform, Bash
- **Hard skills:** PyTorch, ML, RL, NLP, CV, JAX, CUDA, Infrastructures, ROS, Embedded systems, AWS,
- **Soft skills:** Passionate, Communication, Collaboration, Resourcefulness, Self-motivated
- **Certifications:** English certification C-2 from Boston EF Learning Center
- **Languages:** French (native), English (fluent)

RELEVANT GRADUATE CLASSES

- Reinforcement Learning (INF8250AE)
- Representation Learning (IFT6135)
- Probabilistic Graphical Model (IFT6269)