# Michael Sheroubi

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#### Summary

Master's student in Artificial Intelligence & Advanced Visual Computing with 5 years of experience in data engineering, analytics, machine learning, and AI research. Proven track record in designing and deploying AI solutions, optimizing data workflows, and leading technical teams.

## Skills

Theory: Multimodal Alignment, (Deep) Reinforcement Learning, Flow Matching / Diffusion

Technical: Python, C++, SQL, Torch

Languages: English (Native), Arabic (Fluent), French (Intermediate)

Soft-Skills: People-Oriented, Leadership, Proactive, Curious

#### Education

### MScT Artificial Intelligence & Advanced Visual Computing | École Polytechnique, France

2026

**BSc. Honours in Computer Science** | University of British Columbia, Canada Honours Program | Minor in Mathematics | GPA: 3.90/4.33

## **Professional Experience**

Computing Graduate Intern, Lawrence Livermore National Laboratory | Livermore, United States

2025

- Developed a novel multimodal alignment architecture extending CLIP beyond two modalities.
- Explored Flow Matching to bridge modality latent spaces.
- Conducted large-scale training experiments and ablation studies on HPC clusters to validate scalability and robustness.
- Synthesized insights from state-of-the-art research papers to guide experimental design and knowledge sharing.
- Worked on two additional projects; resin activation image classification using traditional image processing, and error correction in metrology machines using traditional machine learning.

#### Machine Learning Engineer, EdgeTunePower | Vancouver, Canada

2024

- Explored the use of deep reinforcement learning for real-time optimal power flow on simulated electric grids.
- Built and deployed an anomaly detection system for real-time grid monitoring.
- Optimized trained models for embedded systems deployment using ONNX Runtime.

#### Data Analyst, Asurion | Vancouver, Canada

2023

- Fine-tuned a large language model (LLM) to detect ineligible product prompts.
- Designed an LLM-driven clustering algorithm using tokenization and cosine similarity, reducing Digital Mapping team workload by 88%.

## Data Analyst & Support, Clearmind International | Vancouver, Canada

2020 - 2023

- Built a Python ETL pipeline to migrate 7+ years of historical data from legacy systems & CSVs to a cloud-based solution.
- Normalized transcript data, reducing query run-time by 75% while increasing accuracy.
- Streamlined the registration process by modeling data flow and eliminating inefficiencies, reducing operational costs by 23%.

#### Data Engineer, Trellis x UBC (Capstone) | Kelowna, Canada

2019 - 2020

- Designed and implemented an AWS Redshift data warehouse combining data from 5 disparate sources.
- Created Python-based ETL pipelines to batch-migrate data from MongoDB to the data warehouse.

## Other

Paper - Sheroubi et al., Untangled mutlimodal latent alignment through learnable anchors
Paper - Sheroubi et al., Unsupervised Contrastive Feature Sharpening for OOD Detection
Hackathon - 1st Place - Mistral x HuggingFace Robotics
Hackathon - Finalist - Mistral Game Jam

In Preparation
2025