

Victor Livernoche

Montréal, QC, Canada | vlivernoche@gmail.com | linkedin.com/in/victor-livernoche | github.com/vicliv

Education

McGill University , PhD in Computer Science	Sept 2024 – August 2028
<ul style="list-style-type: none">GPA: 4.0/4.0Machine learning research supervised by Professor Reihaneh Rabbany	
McGill University , Master's in Computer Science (thesis)	Sept 2022 – August 2024
<ul style="list-style-type: none">GPA: 4.0/4.0Machine learning research supervised by Professor Siamak Ravanbakhsh	
McGill University , BS in Computer Science	Sept 2019 – May 2022
<ul style="list-style-type: none">GPA: 3.89/4.0Honours Computer Science with Physics minor	

Interests

- Generative modeling for images and multimodal generation.
- Theory of energy-based generative models and their applications.
- Anomaly detection and deepfake detection against misinformation.
- Temporal graph representation learning.

Experiences

Research Scientist Student , Mila (Quebec AI Institute) – Montreal, QC	Sept 2022 – Today
Focused on diffusion models and anomaly detection; developed a new anomaly detection method based on diffusion models. Application of model to galactic star anomalies. Member of Mila's Mental Health Committee.	
Research Intern , Mila (Quebec AI Institute) – Montreal, QC	May 2022 – August 2022
Parametrization of reinforcement learning environment BabyAi, in Professor Yoshua Bengio's group. [github]	
Undergraduate Research Assistant , McGill University – Montréal, QC	May 2021 – June 2021
Analyzed data compaction methods in large databases, supervised by Professor Oana Balmau. [github]	
Research Intern , Tech3Lab, HEC Montréal – Montréal, QC	May 2019 – August 2019
Assisted with administrative research tasks, testing simulations, gaining insight into research lab operations, funding processes, and partner communications. Worked with Professor Pierre-Majorique Léger.	

Publications

OpenFake: An Open Dataset and Platform Toward Large-Scale Deepfake Detection	2025
Victor Livernoche, kshatha Arodi, Andreea Musulan, Zachary Yang, Adam Salvail-Berard, Gaétan Marceau Caron, Jean-François Godbout, Reihaneh Rabanny [UNDER REVIEW] Submitted to NeurIPS D&B 2025	
On Diffusion Modeling for Anomaly Detection	2024
Victor Livernoche, Vineet Jain, Yashar Hezaveh, Siamak Ravanbakhsh In The Twelfth International Conference on Learning Representations (ICLR 2024) [Spotlight — Top 5 %] https://openreview.net/forum?id=1R3rk7ysXz	
A Reproduction of Automatic Multi-Label Prompting: Simple and Interpretable Few-Shot Classification	2023
Victor Livernoche, Vidya Sujaya	

ML Reproducibility Challenge 2022. ReScience C 9.2 (#33)

<https://openreview.net/forum?id=t8ZZ2Y356Ix>

Awards

CSDC Student Research Grant 2025

\$2500 — Grant to cover research expenses for building a modern benchmark dataset for deepfake detection.

Excellence Bursary for Computer Science from the Ministry of Higher Education of Quebec 2021

\$1000 — Merit-based award for GPA during the 2020-2021 academic year.