Victor Livernoche

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Google Scholar | **Website**

Education

McGill University, PhD in Computer Science   Sept 2024 – August 2028

- GPA: 4.0/4.0
- Machine learning research supervised by Professor Reihaneh Rabbany

McGill University, Master's in Computer Science (thesis)   Sept 2022 – August 2024

- GPA: 4.0/4.0
- Machine learning research supervised by Professor Siamak Ravanbakhsh

McGill University, BS in Computer Science   Sept 2019 – May 2022

- GPA: 3.89/4.0
- Honours Computer Science with Physics minor

Interests

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

Experiences

Teaching Assistant, McGill University – Montreal, QC   Jan 2026 – April 2026

Assisted the instructor for the Network Science course by designing and coordinating the final project, including defining project topics and managing submissions via OpenReview. Held office hours to support students and handled grading responsibilities.

Research Scientist Student, Mila (Quebec AI Institute) –   Sept 2022 – Today
Montreal, QC

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

Deepfakes in the 2025 Canadian Election: Prevalence, Partisanship, and Platform Dynamics   2025

Victor Livernoche, Andreea Musulan, Zachary Yang, Jean-François Godbout, Reihaneh Rabbany

[UNDER REVIEW] Submitted to The Web Conference 2026 — Short Paper Track

https://arxiv.org/abs/2512.13915

OpenFake: An Open Dataset and Platform Toward Real-World Deepfake Detection   2025

Victor Livernoche, Akshatha Arodi, Andreea Musulan, Zachary Yang, Adam Salvail, Gaétan Marceau Caron, Jean-François Godbout, Reihaneh Rabbany

[UNDER REVIEW] Submitted to ICLR 2026

https://arxiv.org/abs/2509.09495

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=lR3rk7ysXz

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.