

Jack Stanley

PhD Candidate

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🌐 jackstanley.me in jackhtstanley

machine learning + life sciences

🎓 Education

McGill University // Mila AI Institute

PhD in Quantitative Life Sciences

2021 – 2025 | Montréal, QC

- 4.00 GPA, Supervisor: Danilo Bzdok

University of Toronto

Honours BSc in Statistics & Biochemistry

2017 – 2021 | Toronto, ON

- 3.91 GPA, Dean's List

University of Victoria

Mathematics Coursework

2016 – 2017 | Victoria, BC

- Concurrent enrolment during high school

💻 Programming Languages

Python

R

Julia

MATLAB

HTML

CSS

Javascript

🧩 Tools & Frameworks

Linux | Git | PyTorch | JAX | scikit-learn

NumPy | Pandas | HuggingFace | LaTeX

🤖 Models & Architectures

Linear Models | Neural Networks

Deep Learning | Probabilistic Graphical Models

Natural Language Processing (NLP)

Transformers | Variational Autoencoders

Representation Learning | Generative AI

🧩 Miscellaneous

Athletics

09/2017 – Present

- McGill Redbirds: Varsity cross country & track (team captain)
- Toronto Varsity Blues: Varsity cross country & track

Test Scores

- GRE: 169V/165Q
- ACT: 34

👔 Professional Experience

Venture Fellow

Lumira Ventures

11/2023 – Present | Montréal, QC

- Research on emerging technologies and new markets in the life sciences (with a focus on AI drug discovery); company screening and founder interviews.

Summer Venture Associate

Round13 Capital

05/2023 – 09/2023 | Toronto, ON

- Investment sourcing, screening, and financial review (with a focus on AI). Assisting portfolio companies on AI strategy and tooling.

Web Developer

MonstrARTity Creative Community

05/2020 – 08/2020 | Toronto, ON

📖 Recent Research Projects

LLM analysis of clinical notes

Manuscript in Progress

- Designed a novel LLM architecture to pinpoint the most diagnosis-relevant individual semantic elements from multi-page handwritten clinician observations of patients with psychiatric disorders. Allows for the evaluation of the relevance of external diagnostic criteria.

Single-cell foundation models

Manuscript in Progress

- Incorporating external biological information (such as gene pathways) into existing transformer-based foundation models for single-cell data.

Single-cell batch effect correction

Manuscript in Progress

- Developed an approach for the quantification of batch effects and the effective integration of million-cell datasets under distribution shift.

🏆 Scholarships & Honours

FRQS Doctoral Training Scholarship

Fonds de Recherche du Québec - Santé (FRQS)

- \$100,000 over 4 years to support doctoral research

Provost's Scholar, Chancellor's Scholarship, Drew Thompson Scholarship

University of Toronto

- Awarded annually to the top Trinity College undergraduates for high academic achievement

Schulich Leader Scholarship

University of Toronto / Schulich Foundation

- \$80,000 scholarship for STEM leadership potential (only 4 awarded at U of T each year)

BMO National Scholarship

University of Toronto

- \$90,000 scholarship for academic excellence, leadership, and creative thinking (only 10 awarded at U of T each year)