

# John Lin

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## EDUCATION

### University of Toronto

Master of Science in Applied Computing, Artificial Intelligence in Healthcare

Sep. 2024 – June 2026

- *Relevant Coursework:* Computational Imaging, Spatial Data Analysis, Cloud-Native Data Systems, Human Factors and System Design in Healthcare

### Concordia University

Bachelor of Computer Science

Sep. 2020 – May 2023

- *Relevant Coursework:* Data Structures and Algorithms, Machine Learning (ML), Artificial Intelligence, Databases (MySQL), Information Retrieval and Web Search, Natural Language Processing

### McGill University

Master of Science, Experimental Medicine

Sep. 2016 – May 2019

Bachelor of Science, Physiology

Sep. 2012 – June 2016

## EXPERIENCE

### Teaching Assistant, Intro to Software Engineering CSC301

Sep. 2024 – Present

University of Toronto

Toronto, ON

- Mentored four undergraduate teams developing various full-stack and mobile projects
- Delivered tutorial sessions on project deliverables, automating CI/CD pipelines and testing infrastructure

### Founding Software Engineer, Machine Learning Infrastructure

July 2023 – Aug. 2024

lifes.ai

Toronto, ON

- Developed the architecture for a synthetic data generator to create test fixtures for ML model validation
- Piloted cross-OS development through containerized development environments for developer consistency

### Software Developer Intern, Platform and Shared Services

May 2022 – Jan. 2023

SSENSE

Montreal, QC

- Implemented and deployed an automated PubSub subscription manager for message queues, reducing multiple bottlenecks and manual configuration to a single step, saving 50+ developer-hours/month

### Research Assistant, HIV and Gastrointestinal Immunity

Jan. 2019 – Nov. 2021

Research Institute of the McGill University Health Centre

Montreal, QC

- Determined statistical correlations between biological markers and health outcomes through wet lab and clinical studies in people living with chronic infectious diseases such as HIV and cytomegalovirus (CMV)
- Co-authored over 25 scientific publications, including 4 articles as first author

## SELECTED PROJECTS

### Optimizing Priors for Denoising Low-Dose Computed Tomography

Oct. 2024 – Dec. 2024

🔗 [Source](#) | Python, PyTorch, Bash, Slurm, GitHub Actions

- Benchmarked state-of-the-art denoisers using state-space models against convolutional neural networks on low-dose computed tomography (CT) scans. Showed a 10-15% denoising improvement using ADMM vs. RED-CNN.

## SELECTED PUBLICATIONS [\[Full List ↗\]](#)

C=Conference, J=Journal, T=Thesis

- [J.1] Ouyang J\*, **Lin J\***, Isnard S, Fombuena B, Peng X, Marette A, Routy B, Messaoudene M, Chen Y, Routy JP (2020). **The Bacterium *Akkermansia muciniphila*: A Sentinel for Gut Permeability and Its Relevance to HIV-Related Inflammation**. *Frontiers in Immunology*, 11:645. DOI: 10.3389/fimmu.2020.00645.

## TECHNICAL SKILLS

**Languages:** Python, C/C++, Java, Rust, JavaScript, TypeScript, SQL (MySQL, SQLite), R

**Developer Tools:** Git, GitHub, Jenkins, AWS, Docker, Kubernetes, CI/CD, VSCode, Neovim

**Libraries & Frameworks:** Apache Spark, Hadoop, PyTorch, pandas, NumPy, Matplotlib

**Domains:** Artificial Intelligence (AI), Machine Learning (ML), Deep Learning, Natural Language Processing (NLP), Data Science, Data Engineering, DevOps, Software Engineering, Full-Stack Web Development, Big Data