

LEON YAO

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EDUCATION

University Of Waterloo

Sept 2021 - Apr 2023

Master of Mathematics - Computational Mathematics

Relevant Courses: Computational Vision, Numerical Methods, Computational PDES

University Of Toronto

Sept 2017 - Apr 2021

Bachelor of Science - Computer Science, Mathematics - CPGA: 3.63/4.0

Relevant Courses: Software Design, Systems Programming, Operating Systems

SKILLS

Data Science: Pytorch, NumPy, JAX, Pandas, scikit-learn
Languages: Python, C++, JavaScript, HTML, CSS, C#, Java, SQL
Tools: Node.js, AWS, bash, Git, Docker, Linux

EXPERIENCE

Software Developer · Python · JavaScript · Java · Kotlin · SQL · Git

Mar 2023 - Nov 2023

[Encircle](#)

- Realized designs from Figma by working in an agile team with weekly sprints.
- Enhanced the architecture of multiple requested features for numerous clients by optimizing SQL queries in both length and execution time.
- Built internal tools to allow for daily report generation for thousands of clients with Python
- Utilized Firebase Crashlytics to actively monitor and troubleshoot production systems, and analyzed crash data of thousands of users using BigQuery and Google Collab.
- Resolved recurring production issues and deployed enhancements on CI/CD pipelines to improve the performance of the existing backend services in Python, reducing individual query times by several seconds each.

Computer Vision Intern · Python · C++ · Pytorch · JAX · Git

May 2022 - Dec 2022

[Ecopia](#)

- Combined results from current literature in image blending to design algorithm to blend satellite map images taken from different times.
- Trained Neural Radiance models on datasets containing hundreds of images on multiple GPUS in parallel and baked models into high dimensional representations to allow for faster rendering.
- Extended Visualization software to allow for multiple Neural Radiance Field models to be rendered simultaneously.

PROJECTS

Job Bot · Python · Selenium · Git

leoncyao/jobbank.gc.auto.apply

- Created job applying bot to automate emailing employers on the [Government of Canada's job board](#)
- Implemented Machine Learning Algorithms to facilitate understanding of job role details in order to tailor application to employer
- Integrates with [Gmail API](#) to allow for drafting and review of emails, as well as tracking emails sent.

ViewShift · Unity · C# · Git

neonleon123.itch.io/viewshift

- Coordinated a team of artists and musicians from various colleges in Toronto to create visual and audio assets, through constructive discourse and iterative design
- Devised game mechanics and implemented assets with C# and developed a web version using WebGL

AWARDS

Daisy Intelligence Hackathon - First Place - January 2019

- Implemented gradient descent using Python's Numpy library to optimize the behavior of a simulated racecar

Dean's List Scholar 2018 - 2021

- Awarded every year for having a GPA greater than 3.5

Undergraduate Student Research Award - NSERC Canada - Summer 2020

- Awarded \$8000 to research Knot Theory under the supervision of Professor [Liam Watson](#)

Drew Thompson Scholarship - Trinity College - September 2019