LYNNE LIU

Computer Engineering, University of Toronto

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EDUCATION

University of Toronto — 9/2021 - 5/2026 (expected)

Bachelor of Applied Science and Engineering, minors in Engineering Business and AI, PEY co-op

- Major Courses: Computer Networks / Digital Systems / Data Structure and Algorithms / Software Communication and Design (C++) / Probabilistic Reasoning / Calculus
- Minor Courses: Financial Accounting / Organizational Behavior / Market Analysis / Intro to Deep Learning (Python) / Intro to AI (Python) / Intro to Databases (SQL)

SKILLS

Technical Skills

- MS Office, Git, Linux system, Windows system, Alteryx, SAP
- Quartus, ModelSim, LTspice, NI MultiSim, CPU Lator
- 3DSMax, UE4

Certification & Achievements

- 2021 Fall - U of T Dean's Honour list

Languages

- English
- Mandarin

Computer Languages

- C (2 years experience)
  - Reversi AI chess, Simple music library, Automatic word finding game, Automatic money change program
- C++ (1.5 years experience)
  - tic-tac-toe game, Interactive Mapping Software
- Python (1 year experience), PyTorch
  - Handwriting recognition, Spam detection, Gesture classification
- Other Languages
  - Assembly by ARM, Matlab, Verilog, HTML, SQL

WORKING EXPERIENCES

Senior Technical Student — Etobicoke, ON, Canada, 9/2024 - 8/2025

Grid Maintenance Department, Toronto Hydro-Electric System Limited

- Built and maintained Alteryx automation workflows and extracted operational data from internal databases, transforming insights into Excel dashboards and reports for performance tracking and presentation in review meetings.
- Contributed to the early-stage implementation of AI initiatives, supporting automation and predictive analytics across teams.
- Coordinated daily work assignments for field engineers and internal project coordinatation (budget, data analysis, etc.) using SAP, while communicating directly with clients to resolve scheduling needs.

Solution Architect Internship — Jinan, Shandong, China, 5/2023 - 8/2023

Jinan Techfin Information Technology Co., Ltd.

- Assisted Marketing Analyst by brainstorming solutions to update the yearbook resulting in the funding proposal to be approved.
- Performed the public cloud's general development and maintenance process successfully by using the computational resources of the developed chip.
- Applied the company's proposal design guidelines to proofread the solution design proposal draft resulting in the revised proposal to be approved.

PROJECT EXPERIENCES

AI Initiatives - Chatbot — Etobicoke, ON, Canada, 9/2024 - 8/2025

Toronto Hydro-Electric System Limited

- Conducted benchmark testing and validation of AI chatbot responses for safety procedure document comparisons, identifying mismatches and inconsistencies.
- Collaborated with cross-functional teams to analyze discrepancies, document root causes, and recommend resolution steps for improved accuracy.
- Assisted in defining testing timelines, evaluation criteria, and feedback processes to guide Proof of Concept (POC) completion and tool refinement.

Sentiment Analysis (Natural Language Processing), Python — Toronto, ON, CA, 6/2023 - 8/2023

Applied Fundamentals of Deep Learning, formly APS360 of University of Toronto

- Coordinated a team of four by analyzing the project requirements, assigning tasks and reviewing/revising their work resulting in the program to achieve 85% validation accuracy in machine learning.
- Used PyTorch and Google Colab to finish a three-sentiment analysis program which including data preprocessing, Glove word embedding, and LSTM model, used accuracy and loss to improve the model, resulted in high training/testing accuracy.

Interactive map based on GIS technology, C++ — Toronto, ON, CA, 1/2023 - 5/2023

Software design and communication, formly ECE297 of University of Toronto

- Used C++ language and Git to create an interactive map of Toronto, including features like searching, newers' tutorials, best routine for traveling by various data structures (e.g. Priority Queue, Unsorted Set and Map), and different algorithms (e.g. Optimization, Dijkstra), completed four milestones and reached a high grade of 80%.
- Enhanced user experiences by employing color selection theories to design the User Interface, and used the Made to Stick principles to revise the layout, resulting a grade of 71% in the graphical interview.

RESEARCH EXPERIENCES

Pairewise dual-level alignment for cross-prompt automated essay scoring

Shandong University of Finance and Economics — Jinan, Shandong, CN, 2/2023 - 3/2025

- Description
  - It developed a Python-based tool leveraging natural language processing for efficient essay evaluation. The system provides objective essay scores and auto-generates feedback, reducing manual assessment time, enhancing grading consistency, and offering actionable insights for writers to improve their content. The idea of this project is based on the original model of GPT-2 and GPT-3 and diffusion model.
- Contribution
  - Used Python to gather high school students' articles on a public website, and gathered data in CSV files for three grade levels by using developer tools of the website, Pandas library, and the website analyzed tools (e.g. BeautifulSoups) in PyTorch. Each file contains article content, article name, article type, article grade, and article comment. This dataset (around 20668 rows of data) was used for training and testing purposes in this project.
- Paper Link
  - https://www.sciencedirect.com/science/article/abs/pii/S095741742402791X?via%3Dihub