

Mohammed Zaid Mir

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EDUCATION

University of Western Ontario

London, ON, Canada

B.Sc. (Specialization) in Computer Science — Minor in Software Engineering

April 2027

- **Coursework:** Computer Architecture, Machine Learning, Data Structures & Algorithms, Operating Systems, Discrete Mathematics, Statistics, Quantum Computing, Linear Algebra, Game Theory, Complex Analysis, Parallel Programming

TECHNICAL SKILLS

Languages: Python, Java, C/C++, C#, PostgreSQL/MySQL

Tools & Frameworks: Git, Unix/Linux, LaTeX, NumPy, Pandas, Matplotlib, Seaborn, PyTorch, React, Node.js

EXPERIENCE

Embedded Software Engineer Intern

London, ON

The Lab of NODD (Neurobiology of Dual Disorders)

January 2026 - August 2026

- Incoming Intern focused on embedded systems and firmware development.

Software Engineer Intern

London, ON

Q-PEC

September 2025 - Present

- Spearheaded the full-stack development of the company's official website using React.js and Node.js.
- Implemented a responsive, mobile-first design system with Tailwind CSS, increasing user retention by 20%.
- Optimized site architecture reducing page load times by 40% and improving SEO rankings.

Software Engineer Intern

Toronto, ON

Robarts Research Institute

May 2025 - August 2025

- Developed a PyQt5 GUI for a low-cost Fourier ptychography microscope, enabling full-image display with interactive options
- Wrote a Python library to display malaria-infected blood cells with 95% accuracy
- Built a frugal microscope solution reducing equipment costs from \$10,000 to \$200, improving access for developing regions

Data Engineer Intern

London, ON

Canada's Financial Wellness Lab

July 2024 - April 2025

- Developed and fine-tuned deep learning scripts comparing investment decisions for self-directed and advised investors
- Utilized NumPy and Pandas to clean and process over 350,000 rows of financial data, increasing efficiency by 95%
- Implemented and optimized training algorithms on CUDA GPUs using PyTorch, reducing runtimes by 23%

Undergraduate Student Researcher

London, ON

University of Western Ontario

January 2023 - June 2023

- Designed a novel Java program based on Google's PageRanking Algorithm to rank web pages of the Dept. of Mathematics Website, using Jsoup for efficient parsing, extraction, and manipulation, ensuring comprehensive data processing
- Utilized JProfiler and VisualVM to optimize numerical algorithms, enhancing computational efficiency and accuracy by 30%

PROJECTS

mittensOS 🐱 | Pygame, NumPy

- A comprehensive chess engine implementing negamax search with alpha-beta pruning for advanced AI
- Engineered a robust game state management system to handle move validation, special moves, and game status
- Implemented a depth feature allowing the engine to evaluate multiple moves ahead, enhancing decision making

jobSpace | React.js, Python (Flask), PostgreSQL, Tailwind CSS

- Developing a full-stack gig marketplace connecting university students with local short-term employment opportunities.
- Engineered a RESTful API with Flask to handle user authentication, real-time job feeds, and application tracking.

TileVania 🎮 | C#, Unity

- Utilized Unity's Tilemap API for procedural generation of game levels, ensuring modular and scalable level design.
- Optimized rendering pipelines and memory management, enhancing frame rates and reducing latency for real-time gameplay

CONFERENCES

Robart's Retreat (2025); London Imaging Discovery Day (2025)

OTHER

LCM Piano Diploma holder; Canadian University Chess Championship Candidate (Peak Elo/Rating: 2102); Rock Climbing