

KELVIN YU

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EDUCATION

McMaster University

May 2026

Bachelors of Software Engineering Honours

GPA: 3.7/4.0

Coursework: Data Structures & Algorithms, Operating Systems, Databases, Compilers, Machine Learning, Artificial Intelligence, Computer Architecture, Software Testing, Linear Algebra, Differential Equations, Discrete Math & Probability

SKILLS

Languages: Python, SQL, Java, C, C++, TypeScript, JavaScript, HTML/CSS, PHP, Ruby, Elixir

Frameworks/Libraries: Next.js, Express, React, TailwindCSS, Flask, TensorFlow, Spring Boot, Ruby on Rails, .NET

Tools: Git, Microsoft Azure DevOps, Jira, JUnit, Apache Maven, Docker, Kubernetes, WSL, Figma, Matlab, TestRail

Certifications: Microsoft Certified Azure Fundamentals, AWS Certified Cloud Practitioner

WORK EXPERIENCE

TD Bank — *Software Engineer Intern*

May 2025 — Aug 2025

- Implemented a real-time risk assessment microservice with Spring Boot to evaluate AML risk profiles for 1M+ accounts
- Developed SQL in Oracle SQL Developer for backend APIs powering AML services, handling 100K+ daily transactions
- Built automated CI/CD pipelines using GitHub Actions reducing deployment time by 30%, improving release reliability

Score Media & Gaming — *Software Engineer Intern*

Sept 2024 — Apr 2025

- Built scalable account-linking infrastructure in Ruby and Elixir for 4M+ users, enabling cross-platform authentication between theScore Media and Bet platforms, reducing verification latency
- Led end-to-end development of the Reactions feature, boosting passive engagement among 90% of non-messaging users by integrating emojis with Redis backed count tracking and feature flag controls for safe, incremental rollout
- Improved betting accuracy by 30% by combining a simulation-based odds engine with real-time Vegas Sportsbook API data, ensuring data accuracy through validation of multi-format REST responses supporting dynamic market adjustments
- Diagnosed and resolved cross-environment bugs during regression cycles, reducing production hot fixes by 60%

TD Bank — *Software Engineer Intern*

May 2024 — Aug 2024

- Developed an internal tool using Next.js and deployed using Docker for 50+ users, optimizing quiz management for proof-of-concept ideas and user interaction on a centralized platform, decreasing report generation time by 35%
- Engineered a Root Cause Analysis bot for banking applications using Retrieval-Augmented Generation, and OpenAI
- Launched MS Azure for cloud infrastructure, tracked issues using Azure DevOps, scaling resources by 50%

Government of Ontario — *Software Engineer Intern*

May 2023 — Aug 2023

- Engineered a Gitlab CI/CD pipeline, incorporating Docker for containerization and Kubernetes for orchestration boosting deployment reliability and cutting 12 minutes from each release cycle
- Implemented comprehensive PHP and MySQL based custom content management systems to dynamically create, manage, and update events for over 1,000 participants, improving event workflow efficiency and real-time data updates
- Developed dynamic React websites, boosting user engagement by 30% for Ontario's largest cybersecurity conference

PROJECTS

VoiceBridge | *Python, PyTorch, Whisper*

- Developed a real-time speech recognition model for hands free device control, trained on datasets for dysarthric speech
- Applied LoRA fine-tuning to a 244M Whisper model, training 1.7M parameters for domain specific speech recognition
- Awarded 1st place in cohort-wide software engineering capstone for exceptional design, implementation, and execution

CityPathfinder | *Python, JavaScript*

- Built an interactive map based routing system using Dijkstra to find shortest paths on real-world OpenStreetMap data
- Designed a real-time routing visualization system using WebSockets, streaming 100+ updates/sec to animate pathfinding

LEADERSHIP

McMaster Formula Electric

- Collaborated across subteams to deliver competition ready driving functionality by translating Simulink logic into C code

Math Teaching Assistant

- Led 50+ students in tutorials while grading weekly quizzes and providing feedback to students during office hours