Axel Tang

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Profile Summary: Detail-oriented **Software Engineer** and **MEng student** specializing in **scalable systems** and **applied machine learning**, combining 7+ years of independent development with current ML education.

EDUCATION

University of Toronto	Toronto, Canada
Master of Engineering (Data Analytics & Machine Learning)	Expected 2027

Relevant Coursework: Applied Deep Learning, Cloud Computing

University of Ottawa	Ottawa, Canada
Honours B.Sc. in Computer Science, GPA: 3.51/4.00	2020–2024

Honours: Dean's Honour List, International Merit Scholarship

TECHNICAL SKILLS

Languages: Python, **Java**, **C#**, **JavaScript** (React, Node.js), **Kotlin**, **Go**
Frameworks: Spring Boot, Express.js, PyTorch, Selenium, JUnit, REST APIs
Databases: PostgreSQL, MongoDB, Firestore
Tools: Git, Docker, Trello, Jira, VS Code, IntelliJ, Visual Studio
Concepts: OOP, Data Structures, Algorithms, Scalable Software Design

EXPERIENCE

Sky Dream — Information Technology Instructor — Mar–May 2025
- Delivered hands-on **coding** and **aviation technology** lessons to top-performing students.
- Mentored learners to build **interactive applications**, fostering early interest in STEM.

Hong Kong General Chamber of Commerce — Software Intern (IT Dept.) — Jul–Aug 2024
- Built **motion detection** and **face recognition** app using **Python OpenCV**.
- Automated **name matching** via **FuzzyWuzzy** & **SQL**, reducing manual review time.
- Redesigned **intranet interface** with **ASP.NET** & **CSS**, improving usability.

InteractHealthPro — Software Developer Intern — Mar–Jun 2024
- Migrated **CMS system**, improving operational efficiency by **95%**.
- Executed **testing** and **bug resolution** for production deployment.

PROJECTS

HumblexMC Server — Java, Bukkit API, SEO — 2016–Present
- Built and managed a **multiplayer server** with custom **Java plugins** and automated deployments.
- Improved **uptime by 90%** and **SEO rank** from 33 to 4; led a **3-member dev team**.
- Designed performance monitoring tools and optimized **database** for player analytics.

RANSAC Algorithm — Java, Go, Scheme, Prolog — 2023
- Implemented **RANSAC algorithm** for 3D planar detection in **LiDAR point clouds**.
- Achieved **99% confidence** identifying dominant planes representing roads and buildings.
- Integrated **geometric estimation** and **outlier rejection** for robust line/plane fitting.

Umple Open Source Contribution — Java, Regex, Compiler Logic — 2023
- Contributed to **Umple**, a **large-scale** model-oriented language and compiler with 1.78M+ visitors.
- Implemented new **compiler logic** for bracket detection and improved **syntax validation**.
- Resolved multiple **GitHub issues** and created **batch scripting** for windows development from linux/macos.

eHotels WebApp — Node.js, Express, PostgreSQL — 2023
- Designed **employee** and **room management modules** using RESTful APIs and PostgreSQL.
- Implemented **authentication logic**, CRUD operations, and data synchronization.

2D Aim Trainer — C#, Windows Forms, OOP — 2022
- Developed an **interactive desktop app** for FPS aim training using C# and WinForms.
- Implemented **real-time score tracking** and adaptive difficulty curve for gameplay.

CERTIFICATIONS

- **Harvard Online** — Data Science for Business (2025)
- **Deeplearning.AI** — Machine Learning Specialist (2025)