

# 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

Master of Engineering (Data Analytics & Machine Learning)

*Relevant Coursework:* Applied Deep Learning, Cloud Computing

Toronto, Canada

Expected 2027

### University of Ottawa

Honours B.Sc. in Computer Science, GPA: 3.51/4.00

*Honours:* Dean's Honour List, International Merit Scholarship

Ottawa, Canada

2020–2024

## 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

- Delivered hands-on **coding** and **aviation technology** lessons to top-performing students.
- Mentored learners to build **interactive applications**, fostering early interest in STEM.

Mar–May 2025

### Hong Kong General Chamber of Commerce — Software Intern (IT Dept.)

- 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.

Jul–Aug 2024

### InteractHealthPro — Software Developer Intern

- Migrated **CMS system**, improving operational efficiency by **95%**.
- Executed **testing** and **bug resolution** for production deployment.

Mar–Jun 2024

## PROJECTS

### HumblexMC Server — Java, Bukkit API, SEO - humblex.net

- 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**; generated **465k+ views**

2016–2024

### RANSAC Algorithm — Java, Go, Scheme, Prolog - github.com/AxelTWC/RANSAC-Algo-Project

- 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.

2023

### Umple Open Source Contribution — Java, Regex, Compiler Logic - cruise.umple.org/umpleonline

- 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.

2023

### uO Dentistry Website — HTML, CSS, JavaScript - github.com/AxelTWC/uODentistryProject1

- Built a **responsive dentistry website** using HTML, CSS, and minimal JavaScript.

2023

### eHotels WebApp — Node.js, Express, PostgreSQL - github.com/AxelTWC/CSI2132-eHotelsWebApp

- Designed **employee** and **room management modules** using RESTful APIs and PostgreSQL.
- Implemented **authentication logic**, CRUD operations, and data synchronization.

2023

### 2D Aim Trainer — C#, Windows Forms, OOP - github.com/AxelTWC/2d-aimtrainer

- Developed an **interactive desktop app** for FPS aim training using C# and WinForms.
- Implemented **real-time score tracking** and adaptive difficulty curve for gameplay.

2022

## CERTIFICATIONS

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