

Ian Tang

☎ 647-913-4577 | ✉ i7tang@uwaterloo.ca | [in linkedin.com/in/tang-ian](https://www.linkedin.com/in/tang-ian) | github.com/iantang08

EDUCATION

University of Waterloo

Sept 2024 – Apr 2029

Bachelor of Computer Science, Honours

TECHNICAL SKILLS

Languages: Python, Java, C/C++, C#, Bash, SQL, HTML5, CSS3, JavaScript, TypeScript, Lisp, PHP

Tools: Git, Linux, PostgreSQL, MongoDB, Terraform, Google Cloud Platforms (GCP), Amazon Web Services

Frameworks: Flask, LangChain, PyTorch, TensorFlow, Pandas, Node.js, Vue.js, React.js, Express.js

PROJECTS

The Exercist | *LangChain, Google Cloud Platform (GCP), AWS, MongoDB, Flask, Python* Feb 2025 – Mar 2025

- Collaborated with a team to develop a physiotherapy training app using motion-based Switch JoyCons
- Implemented movement tracking and heart rate monitoring to help users maintain motivation during exercises
- Designed a Flask-based backend to securely integrate with MongoDB on AWS for storing user exercise data
- Deployed the platform with Terraform on GCP, ensuring highly scalable infrastructure and reliable performance
- Incorporated real-time feedback via a GenAI-powered voice assistant to enhance user engagement and retentionx
- Secured **Best Use of Databricks** award at UTRA Hacks through AI and data-driven features

Instant Messaging Platform | *React.js, MongoDB, Postman* Oct 2024 – Jan 2025

- Built a full-stack messaging app using the MERN stack, enabling real-time chat with WebSocket protocols
- Secured user authentication with JWT and bcrypt, integrating MongoDB for scalable NoSQL storage
- Tested APIs with Postman and deployed the platform to Render, ensuring reliable public access

Victoria Park School Services | *HTML, CSS, JavaScript, PostgreSQL, Vue.js* Jun 2022 – Jun 2024

- Boosted event tracking by **50%** by launching a student portal for scheduling and community announcements
- Built an interactive map with real-time location updates to help manage hallway congestion
- Developed front-end and back-end components of a website using Vue.js and PostgreSQL

Computer Vision Research Paper | *PyTorch* Jun 2023 – Feb 2024

- Developed RNN and CNN models to investigate how deep learning models process language
- Achieved **70%** accuracy on CIFAR-10 by optimizing CNN and RNN models for image captioning
- Accelerated training by **25%** by leveraging PyTorch pipelines with pandas for dataset preprocessing

ClubConnect! | *Java* Oct 2022 – Feb 2023

- Developed a Java Swing app that boosted student engagement by enabling event sign-ups and calendar-tracking
- Implemented secure authentication that empowered admins to manage events and assign prizes efficiently
- Streamlined user interactions, enhancing scheduling and communication across school activities

EXPERIENCE

Victoria Park Coding Club Co-President Sept 2022 – Jun 2024

- Led engaging and comprehensive workshops through designing and delivering interactive lessons on problem-solving, data structures, and algorithms, enhancing over **200+** participants' understanding in competitive programming
- Collaborated with a team to develop and implement a Senior Division curriculum, ensuring a cohesive and effective learning experience throughout the year for **30+** students participating in the Canadian Computing Contest

Math Club Co-President Sept 2022 – Jun 2024

- Planned and delivered in-depth lessons covering diverse conceptual mathematical topics, improving students' problem-solving skills as well as increasing club participation by over **50%**
- Organized club-wide initiatives and events, fostering a sense of community and encouraging higher participation rates leading to a **66.7%** increase in competitive math challenges over **2** years

Peer Tutoring Lead Organizer Dec 2021 – Jun 2024

- Organized and oversaw a team of student tutors to provide one-on-one support for students struggling in academics
- Designed tailored learning plans and fostered a supportive environment to teach transferable skills in Math and Computer Science, resulting in a **30%** average grade improvement

AWARDS

University of Waterloo National Math Scholarship

2024 – Present

- Awarded to 10 students annually for excellence in mathematics; valued at \$12,000