

KAI ZANG

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Education

University of Toronto

Honours Bachelor of Science, Computer Science Specialist

Toronto, ON

Expected May 2029

- Computer Science coursework GPA: **3.7/4.0**
- Focus: artificial intelligence, software systems, algorithms, data structures, probability, and linear algebra

Research & Technical Projects

Computer Vision & Bionic Robotic Arm Research

Beijing Institute of Technology

2024

- Conducted research on a bionic robotic-arm system using **Python, OpenCV, NumPy, scikit-image, and SolidWorks**, combining computer vision with control logic and engineering analysis.
- Independently investigated technical approaches, documented findings in a research paper, and received an **Outstanding Student Award** through the Beijing Youth Science and Technology Talent Program.

Retrieval-Augmented Information System

Python, FastAPI, PostgreSQL

2026

- Built an information-retrieval system that organized job postings, resumes, coursework, and project documents into searchable records with structured source, tag, priority, and update metadata.
- Combined semantic retrieval with keyword matching and developed diagnostic tools for evaluating retrieval results, applying concepts relevant to **digital archives and research information systems**.

Full-Stack Travel Platform

Flutter, FastAPI, MySQL, Redis

2026

- Developed end-to-end mobile, backend, database, and external API workflows for a full-stack travel planning and booking platform.
- Integrated REST APIs, structured JSON data, caching, persistent storage, mapping services, and third-party tools while independently troubleshooting cross-system integration issues.

Leadership & Community Experience

High School Library

Library Help Desk Assistant

North York, ON

2024–2025

- Supported students with library computers, digital resources, printing, document services, and basic technical troubleshooting.
- Organized physical and digital resources and communicated technical instructions clearly to students with different levels of experience.

Student Council

President

Beijing, China

Prior to University

- Coordinated events including student socials, Halloween programming, field trips, graduation activities, and other school-wide programs.
- Managed volunteers, schedules, logistics, materials, and participant communication while collaborating with students and school staff.

Community & Peer Support

Volunteer

100+ Hours

- Completed more than **100 hours of volunteer service** supporting students, school activities, academic learning, and community programs.
- Provided **two years of ongoing academic and day-to-day support** to a visually impaired high school classmate, developing patience, responsibility, accessibility awareness, and interpersonal communication.

Technical Skills

Programming: Python, Java, C++, SQL, JavaScript, HTML/CSS

Frameworks & Data: FastAPI, Flask, PostgreSQL, MySQL, Redis, REST APIs, JSON

Tools & Research: Git, Linux, OpenCV, NumPy, scikit-image, SolidWorks, information retrieval, technical documentation