


Austin Jiang


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Experience

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| Undergraduate Research Assistant,
<i>University of Waterloo – Supervisors: Prof. Trevor Brown & Prof. Hong Zhang</i> | 09/2025 – Present
Waterloo, Canada |
| <ul style="list-style-type: none">• Initiate exploratory projects on concurrency and distributed ML systems, contributing to early-stage research directions.• Benchmark concurrent data structures under varying workloads, focusing on scalability and throughput.• Conduct literature reviews on application-oriented system design and serverless ML, identifying potential future directions. | |
| Research Engineer (WSRP '24 '25, WELP '24 '25), Wolfram Research | 06/2024 – Present
Boston, USA (hybrid) |
| <ul style="list-style-type: none">• Built parallel computing systems through multicore CPU for cellular automata, including selective cell evaluation, workload scheduling, etc.• Designed constructive algorithms in lambda calculus and combinatory logic, released well-documented open-source functions in the Wolfram Function Repository, and published formal research submissions.• Collaborated with Wolfram researchers to develop symbolic computation tools, such as polygonal tiling generation and experiments with discrete neural networks.• Published results on Wolfram Community with 10k+ views, and scheduled to present at the Wolfram Technology Conference 2025.• Invited by Stephen Wolfram to implement functions for his post and recognized as a “21st Century λ-Combinator-ist.” | |
| Contest Director & Problem Setter, DMOJ: Modern Online Judge | 06/2022 – Present
Remote |
| <ul style="list-style-type: none">• Directed 3 national-level coding contests on Canada’s leading programming platform with 1000+ participants.• Designed 20+ algorithmic problems (data structures, DP, Ad hoc, graph theory, etc.) with full test generation and evaluation infrastructure (USACO Gold to IOI level).• Led a 7-member remote team from top universities to deliver contests. | |
| Co-Founder & Chief Executive Officer, Happy Hackers Foundation | 08/2023 – 01/2025
Vancouver, Canada |
| <ul style="list-style-type: none">• Co-founded a nonprofit promoting inclusive STEM education; organized 5 hackathons (600+ participants, 28 countries) and raised \$60K sponsorships | |


Projects

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| Recap  | 07/2025 |
| <ul style="list-style-type: none">• Won 1st place (Multimodal Track, 800 participants) at Adventure X, China’s largest hackathon.• Built a backend with FastAPI, WebSockets, SQL, deployed on CentOS VPS with Nginx.• Designed a graph-based knowledge model with memory-decay algorithms, extended into an educational system using Google Street View, TEN Framework, and multimodal voice interaction. | |

Zebra Giraffe Swap 

- Built a concept-swapping solution (giraffe ↔ zebra) via **selective UNet training**.
- Implemented with **PyTorch** and **Hugging Face Diffusers/Transformers**.
- Designed a **scalable preprocessing pipeline** on the COCO 2017 dataset.


06/2025

ArtifAI 

- Developed a system to distinguish AI-generated and human-made artworks, addressing ethical and copyright challenges in generative AI.
- Built and deployed the **backend with FastAPI** on a personal **VPS (CentOS + Nginx + SSL)**, integrating **GPT API** as an assistant for copyright queries and creator support.
- Optimized training to handle **memory-intensive models**. Scaled the system to **4,900+ uses by 200+ users**, ensuring backend reliability\transparency in digital art.

03/2024

Honours and Awards

Canadian Computing Olympiad 2024 & 2025 Silver Medalist,
University of Waterloo 

Placed **top 5 and 6 nationally** among the top 20 finalists selected for Canada’s national computing olympiad for the IOI selection.

05/2025

International Olympiad in Artificial Intelligence (IOAI) Team Canada Selection Finalist, *IOAI-Canada*

06/2025

Mathematics National Scholarship Recipient (\$25,000), *University of Waterloo*

Awarded to ~10 students for outstanding academic performance in mathematics and computer science.

04/2025

ACSL Senior 2024 Global Finals Gold Medalist, *American Computer Science League*

9th place worldwide

04/2024

USACO Platinum Division, *USA Computing Olympiad*

01/2024

Education

Bachelor of Computer Science, *University of Waterloo*
Advanced Courses Stream (CS 145, MATH 145, MATH 147)

09/2025 – 04/2030
Waterloo, ON, Canada

International Baccalaureate Diploma, *West Vancouver Secondary School*

09/2020 – 06/2025
Vancouver, BC, Canada