

# Austin Jiang

✉ austinjiangboyu@gmail.com    🔗 austinjiang.com    🌐 AustinBoyJiang    🌐 austin-boyu-jiang

## Experience


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

## Projects



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

<b>Zebra Giraffe Swap</b> 	06/2025
<ul style="list-style-type: none"> <li>Built a concept-swapping solution (giraffe ↔ zebra) via <b>selective UNet training</b>.</li> <li>Implemented with <b>PyTorch</b> and <b>Hugging Face Diffusers/Transformers</b>.</li> <li>Designed a <b>scalable preprocessing pipeline</b> on the COCO 2017 dataset.</li> </ul>	

<b>ArtifAI</b> 	03/2024
<ul style="list-style-type: none"> <li>Developed a system to distinguish AI-generated and human-made artworks, addressing ethical and copyright challenges in generative AI.</li> <li>Built and deployed the <b>backend with FastAPI</b> on a personal <b>VPS (CentOS + Nginx + SSL)</b>, integrating <b>GPT API</b> as an assistant for copyright queries and creator support.</li> <li>Optimized training to handle <b>memory-intensive models</b>. Scaled the system to <b>4,900+ uses by 200+ users</b>, ensuring backend reliability\transparency in digital art.</li> </ul>	

### Honours and Awards

<b>International Olympiad in Artificial Intelligence (IOAI) Team Canada Selection Finalist</b> , <i>IOAI-Canada</i>	06/2025
<b>Canadian Computing Olympiad 2025 Silver Medalist</b> , <i>University of Waterloo</i>  Placed <b>top 6 nationally</b> among the top 20 finalists selected for Canada’s national computing olympiad for the IOI selection.	05/2025
<b>Mathematics National Scholarship Recipient (\$25,000)</b> , <i>University of Waterloo</i> Awarded to ~10 students for outstanding academic performance in mathematics and computer science.	04/2025
<b>Canadian Computing Olympiad 2024 Silver Medalist</b> , <i>University of Waterloo</i>  Placed <b>top 5 nationally</b> among the top 20 finalists selected for Canada’s national computing olympiad for the IOI selection.	05/2024
<b>ACSL Senior 2024 Global Finals Gold Medalist</b> , <i>American Computer Science League</i> 9th place worldwide	04/2024
<b>USACO Platinum Division</b> , <i>USA Computing Olympiad</i>	01/2024

### Education

<b>Bachelor of Computer Science</b> , <i>University of Waterloo</i> Advanced Courses Stream (CS 145, MATH 145, MATH 147)	09/2025 – 04/2030 Waterloo, ON, Canada
<b>International Baccalaureate Diploma</b> , <i>West Vancouver Secondary School</i>	09/2020 – 06/2025 Vancouver, BC, Canada