Jiajing (Jessica) Chen

(780) 263-8781 | jiajing.chen@mail.utoronto.ca | linkedin.com/in/jessicachen-cjj/ | github.com/swannercjj

Education

University of Toronto — cGPA 3.91/4.00 Toronto, ON

Bachelor of Science in Computer Science, Statistical Science, Mathematics *Expected Graduation May 2026*

Relevant coursework: neural networks & deep learning, reinforcement learning, artificial intelligence, nonlinear optimization, computers & games, computer graphics, computer vision

Scholarships: NSERC Undergraduate Student Research Award (2024)

Technical Skills

Languages: Python, C++, C#, C, Java, Q, SQL, GDScript, Assembly
Developer Tools: Git, Unity, Godot, Gymnasium, Blender, WandB, Firebase, Django, React
Machine Learning Frameworks: PyTorch, Jax, TensorFlow, Scikit-learn

Experience

Quantitative Trading Analyst August 2024 – present

RBC Capital Markets *Toronto, ON*

- Conduct quantitative research and implement machine learning trading strategies for stock market applications
- Develop models to test and evaluate multiple strategies simultaneously

Undergraduate Research Assistant — Supervisor: Dr. Michael Bowling

University of Alberta, Department of Computing Science *Edmonton, AB*

Resource Constrained RL *May 2024 – present*

- Trained deep Q-networks on Atari 2600 games, using the Arcade Learning Environment, to examine how reinforcement learning agents manage and optimize their computational cost
- Implemented an action repeats algorithm, allowing agents to selectively repeat actions
- Conducted literature reviews on deep learning, game theory, and continual learning to support research objectives

Projects

Disbanded | *Unity, C#, Blender* January 2025

- Worked with a team of 4 to develop *Disbanded*, a rhythm-based first person shooter game using Unity
- Created concept art for weapons, 3D models for environment assets, and shooting animations in Blender
- Composed and produced original soundtracks, integrating with gameplay to enhance the rhythm experience

Paper Plate Paranoia (utGDDC Fall Jam 2024 2nd Place) | *Unity, C#* October 2024

- Collaborated with a team of 4 to develop an engaging bullet hell game that emphasizes fast-paced gameplay
- Designed dynamic enemy attack patterns, including tracking enemies and a laser with a visual warning system
- Managed animation states in Unity's Animator, using event scripting for smooth transitions and visual feedback

Heart-Beatz | *Arduino, Python, JavaScript, CSS* February 2023

- Built hardware and software solution to personalize users' workout music based on heart rate
- Implemented an Arduino-based circuitry to measure users' heart rate, uploading data to a MySQL database
- Built a React-based web application integrating hardware to display visualizations of the user's exercise data

Academic Matcher | *Java, Firebase, XML* September 2022 – December 2022

- Collaborated with a team of 8 in developing an Android app to connect users based on their academic compatibility
- Designed the app's user authentication and account system using MVP architecture and integrated Firebase
- Implemented both client and server-side performance testing to ensure the app provided a smooth experience

Activities and Volunteer

UofT Machine Intelligence Student Team

Academic Director *August 2024 – present*

- Delivered engaging technical workshops in machine learning for audiences of 150+, each video having 100+ views
- Cultivated and maintained partnerships with researchers and representatives from external academic institutions
- Oversaw on-site operations of events for GenAI Genesis 2025, Canada's largest AI hackathon with 600+ participants