

JESSICA CHEN

780-263-8781 | jesschen.cjj@gmail.com | [linkedin.com/in/jessicachen-cjj/](https://www.linkedin.com/in/jessicachen-cjj/) | github.com/swannercjj | swannercjj.github.io

GAME DEVELOPMENT EXPERIENCE

Fitting In

Project Manager, Game Designer, Gameplay Programmer

September 2025 – Present

- **3D Multiplayer game** where players work together piloting a human-like spaceship to make the ship perform tasks
- Developed spaceship arm **input and movement system** and game system for interaction with outside objects
- Designed and implemented spaceship walking mechanic to be controlled by player terminals
- Pitched and implemented mini-game ideas to repair broken down ship parts to encourage player engagement

Disbanded

Multi-Disciplinary Developer

January 2025

- Rhythm-based **first person shooter game** where player can only shoot or dash on beat with the music
- Designed and created weapon concepts, 3D environment assets, and shooting animations with **Blender**
- Composed drum-based soundtracks synchronized with player actions, enhancing rhythm-driven engagement

Paper Plate Paranoia (utGDDC Fall Jam 2024 2nd Place)

Game Designer, Gameplay Programmer

October 2024

- Bullet hell game where player must collect items while dodging enemies with different attack patterns
- Designed **dynamic enemy attack patterns**, including tracking enemies and telegraphed laser systems
- Implemented event-driven programming to trigger animation transitions based on user input and timers

PROFESSIONAL EXPERIENCE

Quantitative Trading Analyst / AI Engineer

August 2024 – August 2025

RBC Capital Markets

Toronto, Canada

- Re-architected 8+ predictive signal models into a large-scale **PyTorch** model for short-term volume predictions
- Extended coverage for ML data pipelines to include 5+ years of trading data from South America and Europe stock exchanges to power **AI-driven trading algorithms**
- Built and deployed a low-latency trading algorithm with a weighted signal optimization model, enhancing execution for **150+ automated strategies**

Undergraduate Research Assistant — Supervisor: Dr. Michael Bowling

May 2024 – August 2024

University of Alberta, Department of Computing Science

Edmonton, Canada

- **Co-authored paper** in review at **ICLR 2026**, Toward Agents That Reason About Their Computation, introducing solutions for resource and compute constrained **reinforcement learning**
- Implemented an action-repeat mechanism into **deep Q-Network DQN**, allowing agents to **reduce decision frequency by 75%**, lowering computational cost while maintaining training stability and reward performance

EXTRACURRICULAR

UofT eSports / Alberta Esports Association

Shoutcaster

March 2021 – Present

- Delivered live commentary and analysis, engaging audiences with dynamic play-by-play and strategy breakdowns

University of Toronto Machine Intelligence Student Team

Vice President Academics

May 2025 – present

- Defined department strategy, delivering ML workshops and programs for audiences of **400+ attendees**
- Co-chair of **AI Squared reinforcement learning tournament**, with guest workshops and networking events

TECHNICAL SKILLS

Languages: Python, C/C#/C++, JavaScript, TypeScript, Java, SQL, Q, GDScript

Frameworks/Libraries: React, PyTorch, Jax, TensorFlow, Scikit-learn, Gymnasium, Numpy, Matplotlib, Pandas

Developer Tools: Git, Unity, Godot, Microsoft Azure, Figma, WandB, Supabase, Firebase, Django

EDUCATION

University of Toronto — cGPA 3.91/4.00

Toronto, ON

Bachelor of Science in Computer Science, Statistical Science, Mathematics

Expected 2026

Scholarships: NSERC Undergraduate Student Research Award, New College In-Course Scholarship, Dean's List Scholar