

CHRISTINA ZHANG

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EDUCATION

University of Waterloo (3B)

Candidate for Honours Bachelor of Computer Science with Co-Op, 90 cumulative average

Sep 2021 – May 2026

Waterloo, Canada

TECHNICAL SKILLS

Languages: Python, C++/C, C#, TypeScript, Java, HTML/CSS, Racket

Technologies/Frameworks: AWS, MongoDB, Firebase, NoSQL, NodeJS, React, Django, XCode, OpenCV, Keras, TensorFlow, Yolo, OpenGL, Pandas, Git, Subversion Unix/Linux

EXPERIENCE

SideFx Software

May 2024 – Aug 2024

3D Software Developer

Toronto, Ontario

- Reduced mirroring time in **Houdini** by **over 80%** and enhanced user experience by profiling and optimizing the **APEX mirroring tool** for the H20.5 release with **Tracy** and **Python**
- Enabled users to efficiently apply mirror transforms in the animation state by developing a versatile **baking system**
- Decluttered the mirror tool interface by creating mirror plane rigs with **APEX Nodes** using **Python** and **C++**

Campfire (YC 22)

Sep 2023 – Dec 2023

Full Stack Software Developer

Toronto, Ontario

- Increased development efficiency **by 200%** through integrating a **boot-up state management** tool in **C#** into the **Unity Editor** and in-game environment, allowing developers to enter the game at any state
- Deployed and developed a **Web CMS** application with **Vercel**, **TypeScript**, **Next.js**, **Node.js**, **Refine.js** and **Firebase** to allow non-developers to create and edit **LLM prompts** with zero code interaction
- Worked with **XCode** and **Unity** to Deploy a production-ready shop system to iOS, with real-time inventory management and transaction handling

Haven, PlayStation Studios

Jan 2023 – Apr 2023

Tools Programmer

Montreal, Quebec

- Significantly optimized the default landscape and component data export from **Unreal** to **Houdini** by developing **Unreal** plugins in **C++** and **Python** for the procedural generation pipeline
- Achieved a **65% decrease** in export time by optimizing core components of the **cross-DCC mesh exporting** pipeline
- Significantly improved **Blender** workflow efficiency through artist collaboration and feature implementation within Raven

Cisco Systems

May 2022 – Aug 2022

Software Engineer

Ottawa, Ontario

- Developed a GUI testing framework to allow users to write and execute test programs using **Django**, **Python**, **Javascript**, and **Yang**, significantly reducing testing time
- Streamlined development efficiency by **over 55%** by implementing a **JSON configuration parser** with optimized data sourcing and comprehensive test result visualization

Waterloo Aerial Robotics Group

May 2022 – Dec 2023

Computer Vision Member

Waterloo, Ontario

- Developed an innovative solution to a **complex drone routing** problem using **OR-Tools** and **Python** to model and optimize routes with varying capacity and resource constraints

PROJECTS

🍳 SnapChef | [Typescript](#), [React](#), [NodeJS](#), [MongoDB](#), [YOLOv8](#)

Oct 2023 - Dec 2023

- Built a full-stack app with the **OpenAI API** to generate personalized recipes from real-time video of the user's pantry
- Trained a deep-learning object detection model using **YOLOv8** to identify over 30 foods with a **92% accuracy**

🏆 Lol Power Rankings | [Python](#), [AWS Lambda](#), [API Gateway](#), [S3 Buckets](#), [Cloudwatch](#)

Sep 2023 - Oct 2023

- Deployed a **REST API** to predict LoL team strength by training an **XGBoost** model and implementing an ELO system
- Integrated **S3 Buckets** for data handling and leveraged **AWS Lambda** to manage **CRUD** operations

📍 Blob Traffic | [Python](#), [C++](#), [OpenGL](#), [NumPy](#)

May 2022 - Dec 2022

- Explored intelligent navigation by building a **reinforcement learning environment** with the **OpenAI Gym API**, facilitating the training of multiple agents with a **Q-table** approach
- Used **OpenGL**, **Blender** and **C++** to create a **3D visualization** of the pathfinding simulation