Christina Zhang

c734zhan@uwaterloo.ca | (613) 698 – 4482 | github.com/Chrisytz | www.linkedin.com/in/christinaytzhang | chrisytz.github.io

Summary of Qualifications

Languages

- Python, C++, C, Java, HTML, CSS, JavaScript, Racket

Technologies and Frameworks

- Git, NumPy OpenCV, Keras, TensorFlow, OpenGL, Django, React, Unix based OS

Additional Skills

- **Outstanding teamwork skills** and **communication skills** gained from hackathons and professional workplace experiences
- **Creative skills** gained through digital art and design
- **Quick** and **eager to learn** new skills, languages, and technologies
- **Dedicated** and **self-motivated**, willing to take on a challenge

Relevant Projects

Blob Traffic
May 2022 - Present

A **pathfinding simulation** written in **Python and C++**, to explore intelligent pathfinding behavior in a real-world environment

- Used **OpenGL, Blender** and **C++** to create a **3D visualization** of the pathfinding simulation
- Designed and implemented a **reinforcement learning environment** to train **multiple agents** using **a q-table**, done using **OpenAI gym** and **NumPy**
- Initially used an **A* algorithm** as a proof of concept for single agents

HopiBot
Hawk Hacks
May 2022

Won **second place** with a chatbot designed to increase the efficiency of admitting hospital patients

- Created using **CSS, HTML, JS, Flask** and **SQL,** and **Twilio** and the **Google Maps API** was used to send text messages to patients with details based on a multitude of factors
- Methodically **tested** our chatbot and **communicated effectively** in a **high-pressure** situation

Sudoku Solver
Jul 2021 - Aug 2021

An interactive **Sudoku GUI** that can check the user's moves and solve the grid

- Written in **Python** using a **backtracking algorithm**

Colour of Hue
Mar 2021 - Jul 2021

Developed a game inspired by I Love Hue, written using **Python, pygame,** and **multi-processing**

- Created splash art and experimented with colour to successfully create an appealing **GUI**
- Learned and implemented a **database** to save and reload data using **sqlite4**

Professional Experience

Software Engineer
Cisco Systems
May 2022 - Aug 2022

Tasked with **full-stack development** of Ondatra and **automating configurations** of Cisco routers

- Updated the **IPv6 Performance Measurement API**, automated **configuration** for Path Tracing
- Added multiple features to **Yangsuite-Ondatra** with the **Django** framework using **Python, Javascript, YANG,** and **Tabulator**
- Used multiple **Python libraries** and worked with **JSON** files to source and report data in a well formatted and informative manner, **increasing internal efficiency by over 50%**
- Wrote **scripts** in **Go** and **Python** to automate tedious processes to a simple command

WARG
May 2022 - Present

Active member of the **computer vision** sub team in the WARG design team

- Refactored and developed **machine learning** programs using **Python** and **YOLOv5**

IT Developer
EXY Society
Sept 2020 – May 2022

Developed a website using **HTML, CSS, and JavaScript** to provide youth with 21st century skills

- Worked and communicated cross department to provide **IT solutions**

Lifeguard
Aug 2020 - Jun 2021

Held accountable for the safety of patrons, worked efficiently under **high pressure situations**

- **Effective communication and problem solving** in professional environments

Education

University Of Waterloo
Sept 2021 - Present

Candidate for Bachelor of Science Honours in Computer Science/Digital Hardware

- 90 Cumulative GPA, expected graduation April 2026