

Henry Zhangxiao

Software Engineer · Master's in Computer Science Student · Georgia Institute of Technology

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Skills

Languages

Python, C, C++, Java, Shell, Makefile, JavaScript, TypeScript, ReactJS

Technologies

Linux/RHEL/CentOS, Git, OpenShift, Kubernetes, Private Cloud, Transformers, PEFT, QNX, Docker/Podman, GDB, GCC, RPi

Experience

IBM

Markham, ON

Software Engineer

May 2022 - Aug 2023

- Deployed and **regression tested CD, LTSR**, and **Future** release candidate builds using automated **Jenkins CI/CD pipelines** on **AWS, Azure**, and **private cloud Fyre clusters**
- Deployed, upgraded, and manually intervened **Kubernetes clusters** deployed on **OpenShift Container Platform** to debug IBM Cloud Platform Common Services
- Created multiple **Jenkins pipelines** to test **release candidate builds** by enhancing, upgrading, and testing our deployment **Makefiles** and **Bash scripts**
- Maintained a managerial dashboard built in **Django**, tracking over **10,000** GitHub issues and synchronized using **crontab**
- Maintained and upgraded an automation results dashboard built in **JavaScript** and **React**
- Integrated an **automated AWS** resource cleanup script leveraging a **containerized Docker environment**

IBM

New York, NY

Site Reliability Engineer

Jul 2023 - Aug 2023

- Automated** the **deployment** and **provisioning** of **Prometheus** to provide monitoring and alerting functionality on OpenShift 4.12
- Defined and upgraded existing **Kubernetes clusters** using **Helm** and **Helmfile**
- Defined and rendered **.gotmpl** template files for Prometheus, Alertmanager, and Thanos

IBM

Austin, TX

Lead Full Stack Engineer

Jul 2022 - Sep 2022

- Led development** of a **Dynamic Plugins** pilot project deployed using **Kubernetes** on OpenShift Container Platform 4.11
- Created a mockup of the UI using design prototypes from **Figma** and **InVision**
- Developed using **TypeScript**, **Patternfly**, and **Podman**
- Deployed locally using **OKD** and online using **Fyre clusters**
- Built and pushed to **Quay.io** image registry using **Docker**

Projects

Robert Phi 3 Mini

Personal Project

<https://github.com/HenryZhangxiao/Robert-Phi-3-Mini>

Sep 2025

- A **fine-tuned Small Language Model** using **Microsoft's Phi 3 Mini 4K Instruct** model
- Used **Parameter-Efficient Fine-Tuning** to perform **4-bit quantization QLoRA training**
- Fine-tuned on a **custom conversational dataset** to emulate a specific individual's communication style

QNX Car Simulator

Carleton University

<https://github.com/HenryZhangxiao/QNX-Car-Simulator>

Dec 2022

- A **real-time** car simulator written in **C** using **QNX Neutrino** utilizing **QNX SDP 7.1**
- Hosted locally using a server created with **name_attach** that receives and delivers **messages** and **pulses**
- Implemented modularly using the concept of **parent-child processes** and **threads** to satisfy **microkernel** properties

Anki Automation

Carleton University

<https://github.com/HenryZhangxiao/Anki-Automation>

Apr 2024

- Leverages **Google Document AI** to automatically create Anki flashcards from an image
- Image sharpening, shifting, resizing, and cropping preprocessing handled by custom **computer vision** functions leveraging **OpenCV**
- Model trained to **97.6%** accuracy after two weeks

Education

Georgia Institute of Technology

Atlanta, GA

Master of Science in Computer Science, Artificial Intelligence Specialization

Starting Jan 2026

Carleton University

Ottawa, ON

Bachelor of Computer Science Honours

Jun 2024

Relevant Courses: Design and Analysis of Algorithms, Introduction to Reinforcement Learning, Real-Time Operating Systems