Henry **Zhangxiao**

Computer Science · Honours, Game Development Stream · Carleton University

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Skills

Languages **Python**, **Java**, **C**, **C++**, **Makefile**, **Shell**, JavaScript, TypeScript, HTML/CSS
Technologies **Linux/CentOS**, **Git**, **OpenShift**, **Kubernetes**, **Jenkins**, **Private Cloud**, React, Docker, Podman, OpenGL, CMake, GDB, GCC

Experience

IBM
Markham, ON

System Evaluation and Reliability Test (SERT) — *May 2022 - Present*

- Deployed and **regression tested CD**, **LTSR**, and **Future** release candidate builds using automated **Jenkins CI/CD pipelines** and **hybrid cloud Fyre clusters**
- Created multiple **Jenkins pipelines** to test release candidate builds by modifying our deployment and testing **Makefiles** and **Bash scripts**
- Monitored CI/CD triggered **Jenkins jobs** of release candidate builds to ensure the Checkout, OCP deployment, Common Services installation, Crossplane deployment, Zen installation, Upgrade, and Regression Testing stages were successful
- Testing suite covers regression, reliability, automation, upgrade, integration, compatibility, and longevity testing

IBM
Austin, TX

Cloud Pak Configurator • IBM User Experience Design Team - Cross Pak Consistency • Red Hat — *July 2022 - Sep 2022*

- **Led development** of a **Dynamic Plugins** pilot project using **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

Quests of the Round Table
Carleton University

https://github.com/HenryZhangxiao/Quests-Of-The-Round-Table — *Apr 2022*

- A multiplayer card game coded in **Java** with the use of **Java Networking** and **JavaFX**
- Developed using the **Gang of Four** design patterns for regulation of **code maintenance**, **code abstraction**, and **object interaction**
- Used **Apache Maven** and **Git** to ensure version control while working in an **agile** and **model-driven environment**

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

Yume
Carleton University

https://github.com/HenryZhangxiao/Yume — *Apr 2022*

- A **2D real-time** game written in **C++** using **OpenGL**, **OpenAL**, **SOIL**, **ALUT**, **GLEW**, **GLFW**, and the **GLM** libraries
- **Physical**, **parametric**, and **hierarchical movement** all handled through **matrix transformations**
- Graphics are drawn using **vertex shaders** and **fragment shaders** using **GLSL**

Methods For Stratego AI
Carleton University

https://github.com/HenryZhangxiao/Methods-For-Stratego-AI — *Apr 2023*

- A coauthored literature review on **reinforcement learning** and **popular algorithms** and their **implementations** found in **Stratego AI**
- **NeurIPS 2022** compliant

Music Center Simulator
Carleton University

https://github.com/HenryZhangxiao/tuneShare — *Mar 2021*

- Created a music center simulator using **C** while using **structs**, **pointers** and **dynamic memory allocation**
- Users are able to connect, update, and display their stats using **pointer arrays** and **double pointers**

Education

Carleton University
Ottawa, Canada

B.C.S. Computer Science Honours: Game Development Concentration — *Sep 2019 - Present*

Relevant Courses: Introduction to Systems Programming, Abstract Data Types and Algorithms, Introduction to Software Engineering, Operating Systems, Database Management Systems, Design and Analysis of Algorithms, Fundamentals of Web Applications, Object-Oriented Software Engineering, Programming Paradigms, Real-Time Operating Systems, Introduction to Reinforcement Learning