

ZICHENG (WILLIAM) GUO

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TECH STACK

General Skills Linux System(Ubuntu, Debian), Shell Script, Git, Version Control, CI/CD, Apache Httpd
Languages C Family, Java(Android), JavaScript(React, Node), Python(Torch, TensorFlow, Django), HTML/CSS, Lua \LaTeX
Platform Jenkins, Docker, K8s, Proxmox VE, Vultr, AWS, CloudFlare
Databases Relational DB Design, MongoDB, MySQL, SQLite, SQ2

EDUCATION

Bachelor of Applied Science – Computer Science, **McMaster University** Hamilton, ON, Canada 2019 - 2023

- **Cumulative GPA:** 11.1/12 **4.0 Scale:** 3.9/4.0
- **Awards:** Dean's Honor Lists; Graduation With Distinction

EXPERIENCE

Software Developer Auguster 2023 – Current
Freelancer *Remote*

- Successfully delivered **20+ projects**. Specialized in Python, Java and C program development.
- Maintained strong relationship with clients with good communication, responsiveness and provide feedback during the phase of project.
- Work Examples: Java plugin for game Minecraft; Python script that automatically execute variety task on IOS devices using computer vision and emulate Bluetooth IO; JavaScript reverse engineering and modified to the requirement; C++ and OpenGL based tool for game EVE-Online; Cryptocurrency snipping tools for Solana chain; Kubernetes game server cluster solution and etc. .

Assistant Software Engineer June 2022 – January 2023
Noah's Ark Laboratory - Huawei Technologies Canada Co., Ltd *Toronto, ON, Canada*

- Help the development and integration of computer vision technology on edge devices using AI-powered solutions.
- Responsible for data collection, drafting the software development plan, and software implementation for a head pose, eye gaze detection CV algorithm. **Delivered a reliable data collection software using Python(PyGame Lib, Pandas) and head and eye tracking device to collect ground truth;** a demo in Java(TensorFlow Lite) that runs on Android tablet allows it turn on the screen and voice recognition when user looks at the screen.
- Identified and resolved bottlenecks in the multiple CV demo apps (Android Java) by adjusting activation threshold, reconstructing pipeline. Monitor real time performance using ADB(Android Debug Bridge). **Resulting in a minimum 31% boost in performance.**
- Helped fine tuning in-house models for detecting different features using Python(Pytorch & TensorFlow), **increase 11% in accuracy while maintaining same speed.**

Research Assistant January 2022 – January 2023
Lab of Dr. Lingyang Chu - McMaster University *Hamilton, ON, Canada*

- Collaborated with Ph.D. students, aiding machine learning research by organizing over 10 workshops. Help translate laboratory to Linux-only environment by drafting installation guild, CUDA setup and help with docker.
- Conducted comprehensive literature reviews, amassing advanced machine learning insights on **New method of generating targeted/untargeted UAP(Universal Adversarial Perturbation) samples.** Anchored by the profound principles of Semantic locality and Spatial invariance. Developing prototypes using PyTorch that resulting **30% increase in ASR on both VGG-16 and ResNet-18** by only apply local graphic patches.
- Actively engaged in all research phases on **Interpretable GNN**, including brainstorming and experimentation on projects that classified the graph structure by discerning prototypes and patterns, using the result to predict the overall attributes of the graph.

Software Engineer June 2021 – August 2021
Huawei Technologies Co., Ltd *Shanghai, China*

- Spearheaded the Large-scale code restructuring and the decoupling of intricately interconnected components (Android Java), **slashing maintenance costs by 200% and 300% man-hour reduction** for each update.
- Contributed to a JAVA-based OS (HarmonyOS), **delivering over 10+ system update.** Actively communicate with different teams from Legal to UX to finalize implementation. Helped mentor to pear review and **resolving 50+ error ticket** on preview version. Inputting thousands of high quality code into a product currently have **900 million** users.
- Closely collaboration with Testing team using many house-build testing tools to deliver error-free products.