Eve Guo

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University of Waterloo Bachelor of Software Engineering — ***Graduating April 2023***

SUMMARY

10 years of programming experience, with almost 5 years experience working in large C++ projects. Relentlessly detail-oriented in designing both clean, maintainable code and fun, satisfying user experiences.

Languages: C, **C++, C#,** Python, Lua, Java, Scala, Kotlin, Rust, Go, JavaScript, TypeScript, HTML, SQL
Technologies: **Unreal Engine, Unity, CUDA, OpenGL,** Qt, Android, OpenCV, React, Node, Jenkins, Git, Perforce
Expertise: UI/UX design, Game design, Graphics, VFX, AR/VR, Audio/video production, Live event production

WORK EXPERIENCE (CO-OPS)

Programmer — *Homeworld 3*   *Blackbird Interactive, Vancouver, BC*   **Sep 2022 – Dec 2022**
- Crafted UI and gameplay systems in C++ and Blueprints, working closely with designers to fulfill their needs.
- Implemented a custom media player and transcoding pipeline to support Bink media format, and worked with cinematics team to migrate all cutscenes, improving file sizes, performance, and cross-platform reliability.
- Modified engine code and blueprints to enable CommonUI to work together with our existing input scheme.

Associate Programmer — *Company of Heroes 3*   *Relic Entertainment, Remote*   **Jan 2022 – Apr 2022**
- Developed gameplay, rendering, and designer-facing scripting features in C++ and Lua for the singleplayer campaign on Company of Heroes 3.

Jr Technical Director & Developer   *Tangent Animation, Remote*   **May 2021 – Aug 2021**
- Worked on a patch to Blender source code to add support for Pixar's Hydra renderer and USD file format.
- Provided front-line support to artists across all departments by troubleshooting and writing bugfixes for in-house Blender, Maya, and Houdini plugins (Python) and distributed rendering pipeline (AWS Deadline).

SDK Software Developer   *Advanced Micro Devices (AMD), Remote*   **Sep 2020 – Dec 2020**
- Drove migration of projects from Perforce to GitHub, and set up build and test CI pipelines using Jenkins.

Unity Developer   *Spatial, New York, NY*   **Jan 2020 – Apr 2020**
- Overhauled AR/VR-oriented 3D user interface, virtual keyboard, and interaction SFX to unify the user experience across different AR/VR devices and improve UI discoverability for initial public launch (report).

LEADERSHIP EXPERIENCE

Product Manager / Logistics Team Lead   *Hack the North*   **Feb 2019 – Present**
- 2021: Defined requirements, coordinated timelines and facilitated cross-team collaboration for 6 end-to-end projects, including website launch and our live event dashboard used by 3,000+ virtual participants.
- 2020: Led the team to pivot to planning our first virtual event, hosting 3,000+ participants from 48 countries.
- 2019: Co-managed a team of 8, with 11 logistical projects ranging from catering 10,000+ meals to designing efficient check-in and judging processes, to host Canada's biggest hackathon with 1,500+ participants.

Founder and Lead Organizer   *JAMHacks* and *JAMHacks 2*   **Sep 2016 – May 2018**
- Created and organized Waterloo's first 12-hour and 24-hour high school hackathons respectively, with an audience of over 300 students and over $10,000 in sponsorships by 2018.

PROJECTS

Kill the Lich   *Capstone Design Project*   **Sept 2021 – Present**
- An asymmetric multiplayer dungeon crawler game built in Unity and the Unity Netcode framework.
- Primarily acted as a producer, network/systems programmer and UI designer/programmer, within a team of 5.

Raytraced Sunset   ▶   *CS 488 Final Project —* ***Gold Medal***   **Aug 2022**
- A 15-second animation of a cityscape at sunset, simulating Rayleigh and Mie scattering, material properties, multisampled AA, and depth of field, in a raytracing renderer created from scratch in C++ (video, report).

FightVR   🔗   *Red Bull AdrenaLAN Hackathon 2018 —* ***Best VR/AR Hack***   **Jul 2018**
- VR game demo that uses a phone's accelerometer/gyroscope as a VR controller, using Unity P2P multiplayer.