

SUNNY LAN

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github.com/sunny-lan



sunny-lan.github.io



Strongly experienced: C/C++, C#, Unity Engine, Java

Experienced: JS (Node, Typescript, React), Python, OpenCV, PHP+SQL, Arduino

WORK EXPERIENCE

Application Development with Unity C# - VR/Desktop/Mobile

May 2022 - August 2022

@ Unity Technologies - Montreal, Quebec

- Worked on Reflect Review, one of Unity's products for Architecture/Engineering/Construction
- Fixed over 25 bugs including several release blockers (high impact bugs), across multiple platforms
- Added support for Passthrough (AR inside VR headset) in collaboration with Meta
- Implemented navigation using grab/zoom in VR, including integration with multiplayer
- Made prototype for collaborative tabletop model viewing
- Made prototype for real life room scale calibration in VR

VR Game Development in C++

August 2021 - September 2021

@ Behavior Interactive - Montreal, Quebec

- Ported C++ game with custom engine to VR (Steam OpenVR)
- Refactored render engine to allow rendering from multiple camera angles in the same frame
- Implemented base support for UI rendering to a plane in VR
- Debugged rendering problems (flicking, artifacts) using PIX
- Added headset position reset as bindable key, added option for designers to disable specific cameras and camera modifiers (eg. shake) specifically for VR

Windows Kernel Graphics Driver Development in C/C++

May 2020 - August 2020

@ AMD - Markham, Ontario

- Wrote driver code in C/C++, and scripted in Python. Mainly worked with the Hardware Scheduler team
- Helped to reproduce, triage, and debug tickets
- Added self tests (similar to unit tests, but for hardware) in the hardware scheduler driver module
- Helped implement and test page migration on multi GPU systems
- Ported old firmware debugger to Windows, allowing the team to step through firmware code

@ AMD - Markham, Ontario

January 2021 - May 2021

- Continued working with Hardware Scheduler team, maintaining previous projects (such as debugger)
- Wrote a new tool allowing the team to run firmware code without a GPU (see Projects)
- Added code to collect crash telemetry data for the hardware scheduler

PROJECT HIGHLIGHTS

Serious Monkey Business

May 2022 - August 2022

Unity (C#), VR (Oculus Quest)

- A Vapourwave themed tower defense/FPS game in VR, created by a team of 3 interns at Unity
- Personally, I created...
 - Health and money systems
 - UI/logic for tower selection and placement
 - Rocket smoke trail and explosion VFX
 - Rocket launcher turret, banana boomerang, and katana weapon (3D modelling, VFX, and code)

AWARDS

CCO Silver (May 2019) and CCO Bronze (May 2018)

- National programming competition - ranked Top 15 in Canada, out of 2700 contestants

PicoCTF 2nd place in Canada (November 2018)

- Cybersecurity Capture The Flag competition involving web exploitation, binary exploitation, etc.