ANSON NG

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Portfolio: anson-ng.vercel.app | GitHub: github.com/ansonngg | LinkedIn: linkedin.com/in/anson-kw-ng

SKILLS

Programming	C/C++, C#, JavaScript/TypeScript, Lua, Java, Python
APIs/Libraries	DirectX 12 & HLSL, OpenGL & GLSL, Open3D, OpenCV, OpenMP, PyTorch, Qt, Node.js, React
Software/Tools	Unity, Unreal Engine, CMake, Git, Jira, Jenkins, Figma, Photoshop, PostgreSQL, MongoDB

WORK EXPERIENCE

Programmer (Gameplay & Visual Effects)
Mad Head App Limited *Jun 2022 – Jun 2023*

- Maintained and brought new features into *Tower of Saviors*, a popular mobile game with **200k+ daily active users** (DAU) and **$34M annual revenue,** using **Unity** and **C#**
- Collaborated with game designers to implement engaging gameplay content and designed UIs tailored to their requirements, resulting in a **50% increase in DAU** whenever new content was released
- Collaborated with artists to create captivating visual effects, leveraging particle systems and custom shaders, resulting in an increase in average **player rating from 3.8 to 4 out of 5**
- Enhanced the gameplay UI system by transitioning code from the previous UI tool to a more advanced one, resulting in **accelerated development** and **expanded support for customization**
- Revamped the minigame system by optimizing the life cycle management to minimize superfluous updates and event subscriptions, resulting in **improved performance** and **enhanced system stability**

Assistant Engineer (3D Vision)
Hong Kong Centre for Logistics Robotics Limited *Aug 2021 - Jun 2022*

- Developed a **C++**-based 3D metrology software utilizing **Open3D** and **OpenCV** libraries, incorporating features like line segment extraction, defect detection, and geometric calculations on 3D models
- Designed and implemented the GUI of the software using **Qt**, and integrated them with algorithm modules
- Implemented and optimized geometric algorithms provided by researchers, employing techniques such as multithreading and optimizing time complexity, resulting in a **performance improvement of 500%**

PROJECTS

Operation: Apocalypse (Link)

- A **3D first-person shooter** PC game featuring various collectible and usable weapons for players, created together with two university classmates using **Unity**
- I designed and developed a fully functional level featuring **dynamic enemy encounters**, including two distinct enemy types along the path, culminating in an **intense boss fight** at the end
- Although not required, we engaged in discussions about **game optimization** and devised techniques such as object pooling, leaving a lasting impression on the professor

Visiting the Alien (Link)

- A **C++** mini game built with **OpenGL** that allows players to pilot a spacecraft to visit aliens
- I implemented various advanced techniques, including light rendering, skybox visualization, normal mapping, and object instancing, to **enhance the visual quality and performance** of the project
- I developed separate shader and .obj file readers to decouple the reading logic from the rendering process, **streamlining the project's development**

EDUCATION

Bachelor of Science in Mathematics
The Chinese University of Hong Kong *Sep 2017 – Jul 2021*