ANSON NG

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SKILLS

Programming	C, C++, C#, JavaScript, TypeScript, Lua, Java, Python, HLSL, GLSL
APIs/Libraries	DirectX 12, OpenGL, 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 and artists to implement engaging gameplay content and create captivating visual effects, resulting in a **50% increase in DAU** whenever new content was released
- Embedded a new third-party UI tool to the existing gameplay system using a MVVM-like architecture, **expanding support for customization** while **reducing development time by 75%**
- Developed a minigame view and system manager to manipulate life cycles and resource allocations for individual minigames, **rectifying a year-long issue** and **improving performance by 13%**
- Directed the development of a key feature by coordinating designers and programmers, and spearheaded the implementation of the system's logic, resulting in a **310% increase in monthly revenue** upon release

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**, **enabling users to perform calculations on 3D models with ease**
- 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 (github.com/ansonngg/csci4120-project)

- A **3D first-person shooter** PC game featuring various collectible and usable weapons for players, created together with two university classmates using **Unity**
- 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, engaged with teammates in discussions about **game optimization** and devised techniques such as object pooling, leaving a lasting impression on the professor

Visiting the Alien (github.com/ansonngg/csci3260-project)

- A **C++** mini game built with **OpenGL** that allows players to pilot a spacecraft to visit aliens
- Implemented various advanced techniques, including light rendering, skybox visualization, normal mapping, and object instancing, to **enhance the visual quality and performance** of the project
- 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*