KA WAI NG

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Enthusiastic game developer experienced in working on “Tower of Saviors”, a long-standing game with an extensive codebase. Possessing a strong mathematical aptitude and proficiency in linear algebra, data structures and computer graphics. Seeking diverse technical positions in game development to gain varied experiences. Open to participating in game development or contributing to the creation of internal tools, including game engines.

**SKILLS**

**Programming** C/C++, C#, Java, JavaScript, Python

**APIs/Libraries** DirectX 12 & HLSL, OpenGL & GLSL, Open3D, OpenMP, PyTorch, Qt, Node.js, React

**Software/Tools** Unity, Unreal Engine, Figma, Photoshop, Git, Jenkins, Jira, MongoDB, MySQL

**Languages** Cantonese (Native), English (Proficient), Mandarin (Proficient), Japanese (Intermediate)

**WORK EXPERIENCE**

**Mad Head App Limited** Hong Kong

*Programmer Jun 2022 – Jun 2023*

* Maintained and brought new features into the game “Tower of Saviors” using Unity and C#
* Collaborated closely with game designers and artists to deliver new, high-quality game levels/art assets
* Coordinated closely with QA testers to ensure the quality through the implementation of unit tests, and employing effective debugging and optimization strategies such as identifying and resolving overdraw
* Provided code architecture suggestions to senior developers and implemented impactful revamps, resulting in easier development for other developers

**Hong Kong Centre for Logistics Robotics Limited** Hong Kong

*Assistant Engineer**Aug 2021 - Jun 2022*

* Developed a computationally heavy software by using C++ and various geometry libraries such as Open3D
* Designed and implemented the GUI of the software using Qt, and integrated them with backend modules
* Implemented and optimized geometric algorithms provided by researchers, employing techniques such as multithreading and optimizing time complexity

**PROJECTS**

**Tower of Saviors** *Professional Project*

* A mobile puzzle RPG developed by Mad Head App Limited, which is popular in Hong Kong and Taiwan
* I implemented gameplay content followed by unit tests, designed UIs for them, and created visual effects
* The visual effects were made by using the resources provided by artists, particle system and writing shaders
* I also undertook code architecture revamps to facilitate easier development, maintenance, and broader support for features

**Operation: Apocalypse** *Personal Project*

* A 3D first-person shooter PC game, where there is a variety of weapons and items for players to collect and use, made by a group of three people with Unity
* Has only one but complete level with boss fight at the end
* I designed and constructed the level, implemented UIs, and provided coding support

**Visiting the Alien** *Personal Project*

* A mini game written in C++ with OpenGL that controls a spacecraft to visit aliens
* Contains several techniques such as light rendering, normal mapping, object instancing, etc.
* The light rendering follows the Phong illumination model

**EDUCATION**

**The Chinese University of Hong Kong** Hong Kong

*Bachelor of Science in Mathematics Sep 2017 – Jul 2021*

Stream: Enrichment Stream and Computational and Applied Mathematics Stream

Minors: Computer Science, Japanese Language