

Yiu Chung Steven Ho

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Date of Birth: 16-12-1999

Nationality: British

Education

University of Leeds, UK • 2022

Master of Science in High-Performance Graphics and Games Engineering

- Related Modules taken: Foundation of Modelling and Rendering, Geometric Processing, Animation and Simulation, High-Performance graphic, Scientific Computation and Artificial Intelligence.
- Worked on creating a mimic of OpenGL in terms of Rasterization, Matrix Transformation, Texture Mapping, Lighting, Shadowing, and a Ray Tracer.
- Implemented Inverse Kinematics, Soft-Body Simulation and SPH Fluid Simulation.
- Mesh Data Structures, Geometry Curves and Surfaces, and Texture Synthesis and Generation.
- Implemented a Vulkan Rendering program to perform Mipmapping, Anisotropic filtering, Physically Based Rendering, and bloom effect for Post Processing.
- Developed a card game engine, the Nox Engine, as a team of six. Worked as the Animation Engineer, implemented the Animation System and Editor, Asset Importer, Serialization and Deserialization System, and QoL improvements. The project was later participated in the Game Republic Student Showcase 2022.
- 3D Math Skills: Linear Algebra, Vector Math.
- Hands on experience in tools such as: OpenGL, Vulkan, Visual Studio 2019/2022, GLSL and git Version Control.

Swansea University, UK • 2021

Bachelor of Science (Hons) in Computer Science – First Class Honours

- Related Modules taken: Computer Graphics, Introduction to Video Game Programming, Web Application Development, Software Engineering, Advanced Object-Oriented Programming (C, C++), Cryptography and IT-Security, Writing Mobile Apps (Android, Kotlin), Database System etc.
- Participating in group discussion work which involve exchange of ideas and finalize decisions on a certain topic; Present ideas and findings in the form of visual and verbal presentation.
- Worked in team of three to six to complete assigned projects. Motivated and inspired team members through offering support, encouragement, and positive attitude.
- Analyzing various resources of information in a structured, well-evidenced and coherent manner.

Tang King Po School • 2017

Hong Kong Diploma of Secondary Education (HKDSE): Chinese, English, Mathematics, Biology, Chemistry

Skills

Language: Proficient and fluent in Chinese (Cantonese) and English

Programming Language: C, C++, C#, Java, Python, Kotlin, HTML and CSS, MySQL, Laravel, PHP

Hands on experience: OpenGL, Vulkan, Unity, GLSL, Visual Studio 2019/2022

Other: Git Version Control, Unix/macOS, Android Studio

MSc Project Dissertation

Hair Simulation

- TBC.

Final Year Dissertation

Improved Video Game Technology

- Improve enemy's A.I. behavior in an existing Unity3D game which involves:
- Replacing Finite State Machine A.I. with Behavior Tree.
- Improving A-Star pathfinding algorithm with random selection of nodes.
- Implementing Group Behaviors where a group of enemies which they can interact and act differently.

Project Done in University

Nox Engine, COMP5530M Group Project, University of Leeds

- Source: <https://gitlab.com/sharlock93/noxengine>
- Demo: <https://www.youtube.com/watch?v=RSH4iIbSRrY>
- A game engine that is targeted to have card game as the main focus.
- Implemented the Asset Loading, Animation System, Animation Editor, some part of the Entity Component System (ECS), some part of the UI (Presets panel, Inspector panel – customizable game objects), Serializing and Deserializing System.
- Utilized: C/C++, OpenGL 4.6, GLSL, Visual Studio 2022, git Version Control, Assimp, Glad, GLFW, GLM, ImGui, ImGuizmo, RenderDoc.

Side Projects

Final Fantasy Unity Clone

- <https://github.com/stevenwhatever123/final-fantasy-unity-clone>
- Developed a Final Fantasy VII remake like game with basic mechanics using Unity.
- Added a system which switches between combat and cutscene smoothly that is inspired by Final Fantasy VII Remake.

Foxy Platform

- <https://play.google.com/store/apps/details?id=com.fireintheho.foxyplatform>
- Developed and published a 2D platform game on Google Play Store using Unity.
- Implemented an infinite platform generator and score system.