YI QIAN

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CONTACTS

LinkedIn	https://www.linkedin.com/in/yi-qian/
Github	https://github.com/HardGaming01
Personal Site	https://qianyi.dev/

EDUCATION

2018/09-2022/04	BSCS in Real Time Interactive Simulation (RTIS), *DigiPen Institute of Technology*

SKILLS & ABILITIES

Languages & Libraries	Team Cooperation	Academic Knowledge
• C/C++	• Git, SVN	• Object Oriented Programming
• Python Scripting	• OpenGL	• Data oriented Programming
• UE Blueprint	• Test & Debug	• ECS structure
• CMake	• Code review	• Data structures & Algorithm
• UBT	• Auto CI	• Skeletal Animation
• GLSL	• Agile Planning	• Physics Simulation
• glm / Eigen	• Unit test design	• Behavior Tree
• GLFW/SDL2/SFML	• Doxygen Documentation	• A* Path finding
• Assimp		• Spatial partition
• Dear ImGui		• Numerical Integration

TEAM PROJECTS

FPS CHESS – ONLINE 2-PLAYER TURN-BASED FIRST-PERSON SHOOTER
UNREAL ENGINE 4 – SENIOR PROJECT

11/2021-PRESENT	UI Programmer · Custom game mode editor · Ocean Simulation (with object buoyancy) · Chess piece promotion mechanic & cutscene · Online steam match making lobby · 3D interactable main menu · Gamepad UI navigation · Ability VFX material Alpha gameplay video: https://www.youtube.com/watch?v=YSOLC69F7hQ

GRAV-LINK – 2D ADVENTURE PLATFORMER
UNREAL ENGINE 4 – JUNIOR PROJECT

07/2020-04/2021	Tech Lead
	· Build the Art/Audio/Design pipeline
	· Architected & implemented all interactable objects
	· Integrated music switch and sound cues with Wwise
	· All Character & Enemy animation blending in "True First person"
	· Implemented all screen space VFX
	· Implemented all input & action binding logic
	· All UI navigation, animation & logic
	· Scripted and designed all cutscenes
	· Refined post processing materials
	· Gameplay video: https://youtu.be/DMauu9CuKic

SIGHTBRINGER – 2D ADVENTURE PLATFORMER
C++ CUSTOM ENGINE – SOPHOMORE PROJECT

09/2019-04/2020	Producer & Physics/Architecture Programmer
	· Integrated Spine animation runtime
	· Implemented 2D SAT collision detection & resolution
	· Designed ECS engine architecture
	· Dear ImGui based UI framework
	· Custom UI framework with Gamepad/Keyboard navigation
	· 2D Object picker detecting through transparent pixels
	· Designed & implemented a robust event system
	Free on Steam store and Digipen Game Gallery:
	https://store.steampowered.com/app/1400110/Sightbringer/
	https://games.digipen.edu/games/sightbringer

PERSONAL PROJECTS

- Cube map reflection capture
- Behavior tree COVID simulation
- A* path tracing simulation
- Grid Based map analysis and interest map generation
- Skeletal Animation simulation (with Inverse Kinematics support)
- Custom Spline editor (Python & Qt)
- CPU based full path tracer (SIMD, ray marching, image-based lighting)
- Custom memory manager & heap debugger
- Custom CPU profiler

LANGUAGE PROFICIENCY

Chinese	First Language.
English	Fluent in work, life and educational space.
Japanese	Listen & Speak proficiency

TEACHING EXPERIENCE

2021/09-2022/04	Teaching Assistant for CS315 (Low-Level Programming)