Alex Liu

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SKILLS

Software/Game Development: C#, C++, C, Java, JavaScript, x86 Assembly, Unity, Game Logic & Editor Tool Development, AI Design, PyTorch3D, ImGui, Qt, VR/AR, WebXR
Graphics Development: Shader Development, Computer Graphics, OpenGL, WebGL, HLSL, GLSL, PBR, Physics Simulation
Management: Git, SVN, Redmine, Miro, Trello, Notion

WORK EXPERIENCE

SILVERJAY STUDIO   New York, NY
Founder & Lead Developer   *September 2021-Now*

- Founded a student-organized independent game studio based in New York City in 2021 with 15 active members, 5 completed game projects, 2 ongoing large-scale projects, and 4+ national and international awards.
- Worked on games with 3-5 years of development time; developed professional tools for large-scale projects. *(github.com/Skyrim07/SKCell)*

NYU FUTURE REALITY LAB   New York, NY
Undergraduate Researcher   *October 2023–Now*

- Actively conducting research under *Prof. Ken Perlin* on applications of computer graphics in collaborative mixed reality. Projects planned to be presented in SIGGRAPH 2024.

GAMELOFT, INC.   New York, NY
Game Software Engineer Intern   *May 2022–Aug. 2022*

- Developed physics simulation, player behavior, and UI system using Unity and C#. Implemented character AI using Behaviour Trees and Goal-Oriented Programming.
- Researched and developed effects for fog, water, and stars using ray marching and Compute Shaders.
- Developed editor tool for editing character behavior state machines.

NETEASE, INC.   Hangzhou, China
Game Client Engineer Intern   *July 2020–Nov. 2020*

- Developed character clothing in *NARAKA: Bladepoint* using mass-spring systems for physics and multi-pass PBR shaders for realistic rendering.
- Developed UI and event systems for tutorial sessions using Unity and C#.
- Optimized GC allocation using Unity Profiler and rendering overhead using Render Doc.
- Developed timeline editor tools to synchronize character animation, particle effects, and game logic.

NEW YORK UNIVERSITY   New York, NY
Undergraduate Researcher   *May 2023 – Dec. 2023*
ML-Based Terrain Generation, Prof. Gizem Kayar

- Researched algorithms to perform procedural terrain generation by sketches using GAN.

NEW YORK UNIVERSITY   New York, NY
Teaching Assistant   *Sep.2023 - Now*

- TA for CSCIUA-480 Computer Graphics (Spring 2024); TA for GAMESUT-121 Intermediate Game Development (Fall 2023).

BILIBILI.COM   Online
Instructor   *January 2023-Present*

- Published 25+ episodes of game development courses (https://www.alexliugames.com/courses) with 250k+ views.

EDUCATION

NEW YORK UNIVERSITY   New York, NY
B.A in Computer Science, B.F.A in Game Design   2021-2025
Cumulative GPA: 3.94/4.00   Computer Science GPA: 4.00/4.00

HONORS & AWARDS

Best Overall, Global Game Jam 2023 (New York Site)	**Best Overall,** Global Game Jam 2022 (New York Site)
Best Student Game Nominee, CUSGA 2022	**Best Game Jam Nominee,** IndiePlay 2022 – China Indie Game Awards
Best Overall, CiGA Game Jam 2022 (Shanghai Site)	**Best Student Game Honorable Mention,** IGF 2021
Best Tech Award, NetEase Ease-Plan Minigame Challenge 2020	**Best Art Award,** NetEase Ease-Plan Minigame Challenge 2020
Best Student Game Nominee, IndiePlay 2020 – China Indie Game Awards	**Excellent Student Game,** 2nd China Art Games Competition
Gold Prize, China Academy of Art "Lin Feng Mian" Awards	