Chu Li

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Education Background

Carnegie Mellon University — Master of Entertainment Technology 9/2023 – 5/2025
Core Curriculum: Game & Experience Development *(C#)*, Computer Graphics *(C++)*, AI Generative Art Pittsburgh, PA

New York University — BFA in Interactive Media Arts with a Second Major in Computer Science 9/2019 – 5/2023
Core Curriculum: Data Structure & Algorithms *(Java)*, Interaction Programming, Operating Systems *(C)*, Computer Graphics *(WebGL/JavaScript)*, Web Application Development, Media Art New York, NY

Tools & Tech: Unity, Java, C++, C#, Python, HLSL, Unreal Engine 5, Oculus Quest 2/3, JavaScript, Blueprint, GitHub, Perforce
Creative & Design: Figma, Houdini, Maya, Photoshop, Premiere Pro, Runway, Suno, DALL·E

Professional Experience

Unreal Engine Audio Analysis Plugin Commercial Collaboration: Beijing Immersive Space Vision Co. | 05/2024 – 09/2024
Unreal, Github | Plugin Engineering & Project Management

- Designed custom real-time audio analysis in Unreal, including spectral analysis with user-defined frequency bands—unavailable in native tools. Built from scratch to support flexible audio-reactive systems, showcasing originality in algorithm design and engine integration.
- Engineered modular Blueprint systems for data streaming and real-time scene effects.
- Delivered commercially licensed iterations (projected $4K each); led a small dev team, managing contracts and workflow via ClickUp.

Project Experience

VR Ecological Exploration Game Academic Collaboration: CMU – Center for Transformational Play | 01/2025 – Present
Unity, Quest 3, Perforce | VR Software Development & Interaction Design

- Sole programmer, developing core gameplay and NPC systems, including VR locomotion, object interactions, physics-based mechanics, a modular task system, and NPCs with state-driven dialogue and NavMesh navigation for contextual responses and pathfinding.
- Designed and managed a large-scale codebase, integrating structured documentation, modular design. Used AI-assisted prototyping for boilerplate code generation and debugging, and systematic task tracking to ensure clarity and scalability.
- Designed and developed a VR experience where players, shrunk to 20 cm, explore their backyard to solve environmental challenges, emphasizing unnoticed details and the impact of small individual actions on environmental change.
- Led playtesting, gameplay, art, and design integration, tracking assets, refining priorities, optimizing workflows, and iterating on feedback.

Experimental Music Game Subject Matter Expert: Epic | 09/2024 – 12/2024
Unreal Engine, Verse, Niagara | Visual Effects & Technical Art

- Designed music-driven visual effects and materials with real-time environmental response using Niagara and Level Sequencer.
- Built boss VFX and synchronized particle interactions; directed in-game cinematics and transitions.
- Collaborated with artists to realize visual direction; showcased at ETC Festival with feedback from 100+ industry professionals.

Scotty3D Graphics Engine Course: CMU 15-662 Computer Graphics | 01/2024 – 04/2024
C++, Computer Graphics | Rendering, Simulation, and Animation Systems

- Implemented core components of a modular 3D graphics engine as part of advanced coursework.
- Built systems for triangle rasterization, mipmapped texture sampling, and supersampling, enabling high-quality image synthesis.
- Developed a physically based path tracer supporting global illumination, materials with Fresnel reflection/refraction, and environment map importance sampling.
- Built a skeletal animation pipeline with forward/inverse kinematics, linear blend skinning, and collision-aware particle simulation.

Music-Driven Scenic Visualization Client: Deeplocal | 01/2024 – 05/2024
Unity, Spotify Web API | Real-Time Media Engineering & Creative Design

- Sole programmer of a 2D Unity experience integrating Spotify Web API, featuring audio-reactive landscapes, dynamic weather, and layered asset management for scenic depth.
- Simulated the feeling of watching landscapes pass through a car window using procedural generation and animation states.
- Led testing with 50+ K–12 users; received 100% client satisfaction for emotional impact and visual design.

We In Research Space (WIRS) Web Application Independent Project | 03/2022 – 11/2022
Node.js, Express, CSS, MongoDB, Heroku, Figma | Full-Stack Web Development, UX/UI Design

- Conceptualized and developed *We In Research Space (WIRS)*, a web platform enabling researchers to discover and connect with collaborators across disciplines.
- Conducted interviews with PhD students from various fields to identify pain points in collaboration, informing the design of user personas and journey maps.
- Designed UIs in Figma and implemented them with custom CSS, translating design specs into responsive front-end components.
- Built features using Node.js and Express: authentication, profile management, keyword search, and real-time chat. Utilized MongoDB for scalable data storage; deployed on Heroku.

Awards & Recognitions

- **Finalist, MIT AI Film Hack 2025** | *Dance in the Ashes*, a fully AI-generated short film using DALL·E, Suno, and Runway
- **Accepted Presenter, Cumulus Detroit 2022 – Design for Adaptation Conference** | Presented *Rising*, a 9-month NYU research project on CO_2 emissions, presented as a responsive installation built with MCU sensors and Unity, exhibited at NYU Bobst Library.
- **1st Prize, NYU Hackathon 2022 (Health & Well-Being Track)** | Designed an interactive app for people with food allergies.