

EDUCATION

- **University of California San Diego** La Jolla, CA, USA
Master of Science in Computer Science and Engineering Sep 2025 – Dec 2026 (expected)
- **Zhejiang University** Hangzhou, Zhejiang, China
Bachelor of Engineering in Industrial Design Sep 2020 – Jun 2024

PROJECTS

- **InnoWeaver** ZJU International Design Institute
Agentic Innovation Platform Nov 2024 – May 2025
 - **Agentic Backend:** Using FastAPI and LangGraph, engineered a highly concurrent agentic backend; all methods were implemented asynchronously to power complex, LLM-driven design ideation workflows.
 - **Data & Frontend:** Architected the data stack with MongoDB for primary storage and Meilisearch for efficient retrieval-augmented generation (RAG). Developed a responsive, modern frontend with Next.js and Tailwind CSS.
- **Pastor** Graduation Thesis
Unity Evacuation Simulation Serious Game Jan 2024 – May 2024
 - **Crowd Simulation:** Implemented the Social Force Model and integrated it with Unity's NavMesh to enable complex, pathfinding-driven agent behavior in dense crowds.
 - **Software Architecture:** Utilized the MVC pattern alongside the QFramework to architect a decoupled and maintainable codebase for game logic and UI systems.
 - **Editor Tooling:** Developed an in-game map editor for dynamic obstacle placement and modification, significantly streamlining the level design workflow.
 - **Game Feel & VFX:** Employed the Feel plugin to create and polish numerous UI and in-game visual effects, substantially enhancing the player experience.
- **Lajolla Renderer**
C++ Physically Based Renderer
 - **Disney Principled BSDF:** Implemented full Uber-shader with energy-conserving metallic, dielectric and subsurface lobes
 - **Volumetric Path Tracing:** Added delta tracking and equi-angular sampling for heterogeneous media
- **WebGPU Forward+ & Clustered Deferred**
 - **Lighting Pipelines:** Implemented Forward+ and clustered deferred rendering pathways, sustaining 30 FPS in scenes with 5,000 point lights via compute-shader light clustering.
 - **Optimization:** Packed G-buffer and render bundles, achieving 3-4× speed-up on 2 k-light scenes.

EXPERIENCE

- **International Design Institute, Zhejiang University** Hangzhou, China
Research Assistant Intern Jun 2024 – Jun 2025
 - **Multi-agent Research:** Developed LLM-driven autonomous agents for design ideation and evaluation
- **Zhejiang University** Hangzhou, China
Teaching Assistant — Computer Game Programming Sep 2023 – Jan 2024
 - **Course Support:** Led weekly labs and graded assignments for students

PROGRAMMING SKILLS

- **Languages:** C++, C#, TypeScript, Python
- Technologies:** CUDA, Unity, Vulkan, WebGPU, FastAPI, Next.js, Git