Lixin Zhu

Durham, North Carolina, 27707

9196976875 lz284@duke.edu xxskyrrezlx.github.io linkedin.com/in/lixin-zhu-9ba085310/

SKILLS

Programming Languages& Technologies: C/C++,Python,C#,Cuda,WebGL,OpenGL,Unreal Engine, Unity,RenderDoc

AI & Data Processing: PyTorch, Deep Learning,Transformer, NLP(word embeddings, review analysis)

Version Control: Git, P4V, Plastic SCM

Language Skills: Mandarin Chinese (Native), English (Fluent, Professional Proficiency)

EDUCATION

Duke University Durham, U.S.A.

Master of Computer Engineering *8/2024- 5/2026*

Fudan University Shanghai, China

Bachelor of Engineering in Software Engineering *9/2020- 6/2024*

EXPERIENCE

School of Software, SJTU *AI researcher* *10/2025-now*

• Researching on **text- and image-based 3D scene generation**, contributing to the full research pipeline. Remote

• Working on model and pipeline development focusing on **object model generation** using multiple approaches.

• Participating in full-stack research workflow and improving generation consistency and fidelity.

BrushBits *Part time | Unreal Gameplay Engineer, Combat Designer* *6/2025-9/2025*

• Built the project's foundational architecture with a focus on **class design, modularity and future scalability**. Remote

• Developed core gameplay systems using **Unreal GAS&C++**, prioritizing **clean APIs and subsystems**.

• Designed the combat framework with **robust data processing** and modular,extensible interfaces.

Venture Games *Intern | Unreal Gameplay Engineer* *4/2025-8/2025*

• Developed **gameplay systems** emphasizing clear interfaces, reusable modules and architecture. San Francisco, CA

• Implemented multiplayer features using Unreal **networking framework**, replication strategy and RPC.

• Applied object rendering optimizations and using **level streaming** to improve large open world performance.

Innovation Co-Lab *Part time | XR Game Developer* *2/2025-present*

• Assisted students in **VR game** development, debugging, packaging, and **multi-platform** deployment. Durham,NC

• Generated high-quality models from point clouds using **Houdini**; used **RenderDoc** to analyze VR frame time and Improved performance and stability of Unreal VR scenes through investigation of **Nanite, Lumen**.

• Served as **VR tour guide**, introducing and guiding students & visitors through immersive VR experiences.

Perfect World Co., Ltd., *Intern | Technical Development Department* *7/2023- 8/2023*

• Designed and implemented player ranking system integrating backend data with frontend display. Shanghai

• Built **Vue2 web** application for system visualization and user interaction and contributed to full-stack workflow.

PROJECTS

OpenGL Rendering Engine *C++,OpenGL* github.com/xxsKyrreZLX/OpenGL *9/2025- present*

• Built a lightweight **OpenGL** rendering engine with a modular, extensible architecture and error handling.

• Designed **clear abstraction layers** (VertexArray, IndexBuffer, Shader, Renderer) with clean APIs for maintainability.

• Added **essential modules**,shader system, texture loader and uniform manager to support a modern rendering pipeline.

Aspect-Based Sentiment Analysis of Game Reviews *Python,NLP* github.com/xxsKyrreZLX/ABSA *8/2025-11/2025*

• Building a pipeline to analyze large-scale player reviews: **text cleaning, aspect extraction, sentiment classification**.

• Leveraging **word embeddings and transformer-based models** to analyze labeled training datasets.

• Conducted under the guidance of an experienced TikTok ML researcher, ensuring professional methodology.

CUDA parallel computing to optimize Monte Carlo method calculations for Ising model *2/2024-6/2024*

• Developed a simulation to model magnetic behavior and state changes in 2D Ising model Using **C and cuda.**

• **Parallelized computations** using GPU for enhanced performance and data visualization.