Xinyi Zhou

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EDUCATION

Georgia Institute of Technology   Atlanta, US
M.S. in Computer Science   *2024 – 2026 (Expected)*

Zhejiang University   Hangzhou, China
B.Eng. in Computer Science   *GPA: 3.89/4.00*   *2020 – 2024*

EXPERIENCE

System R&D Intern   Mar. 2024 – May 2024
Department: Cruise Pilot   *Momenta, Shanghai*
- Developed the frontend and backend of a data management platform, successfully incorporating a feature for the reorganization and classification of raw data
- Developed advanced scene filters to identify problematic cases in real self-driving scenarios, rigorously tested their effectiveness (achieving 100% recall and 83% precision), and successfully integrated them into the mainline
- Implemented automated scene tagging scripts for systematic analysis
- **Skills**: Full Stack Development, Data Mining, Flask, Vue.js

Research Assistant   May 2023 – Present
Advisor: Prof. Lingjie Liu   *University of Pennsylvania*
- **Topic**: efficient generative 3D avatar with gaussian splatting
- Synthesized head avatars with generative textures and head templates
- Accelerated 3D-aware image synthesis with a gaussian splatting rasterizer, achieving real-time rendering
- **Skills**: Deep Learning, Generative Models, PyTorch

PROJECTS

Protein Similarity Retrieval | *Python, PyTorch*   May 2023 – June 2023
- Modified the network structure based on the baseline CNN-ED, including adjustments to batch size, embedding size, and similarity distance calculation method
- Replaced the optimizer with RAdam, resulting in a 19% increase in accuracy on the test set
- Attempted to replace the network structure with different architectures, including RNN and Attention

Simplified Linux Kernel | *C, Assembly*   Oct. 2022 – Dec. 2022
- Implemented a simplified version of the Linux kernel in C, possessing basic operating system functionalities
- Implemented kernel entry, interrupts, process creation and priority scheduling, multithreading, virtual memory, and hierarchical page tables

MyNote | *C++, Qt, MySQL*   Apr. 2022 – June 2022
- Implemented a text editor for taking diary that supports quick search by date, tag or other attributes
- Designed graphical user interfaces using Qt to respond to user actions
- Accelerated data fetching by connecting to databases, storing meta data, and executing queries

HONORS AND AWARDS

Zhejiang University First-class Scholarship   2022
granted by Zhejiang University

First Prize in Chinese Mathematics Competitions, Zhejiang Division   2021
granted by Zhejiang Mathematical Society

TECHNICAL SKILLS

- **Languages**: Python, C, C++, Assembly, Shell, JavaScript
- **Frameworks**: PyTorch, Numpy, Flask, Vue.js
- **Toolkits**: Git, Tmux, Markdown, LaTex, MeshLab