HAOYANG CHEN

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EDUCATION

Zhejiang University (ZJU), College of Information Science and Electronic Engineering Hangzhou, China
B. Eng. in Electronic Science and Technology Sept. 2019 – June 2023

- GPA: 3.87/4.0
- Courses: Fundamentals of **Data Structure**, **Advanced Data Structure** and Algorithm Analysis, Operating Systems, Computer Network, Computer Organization and Design, Digital Systems

RESEARCH EXPERIENCES

Latent-NeRF-Scene-Editing(Python)
Advisor: Assistant Prof Yiyi Liao Dec. 2022 – Apr 2023

- Realize the editing of indoor/outdoor scenes based on the 3D generation of NeRF and diffusion model
- This work combines scene reconstruction(Instant NGP), and uses diffusion model to generate different text-guided objects, then referred to GIRAFFE's scene editing technology to integrate objects and scenes and make fine-tuning
- Propose two in indoor scenes editing methods, DreamFusion and Latent-NeRF like method, which can achieve different editing results.

PROJECT EXPERIENCES

6.1810 Operating System (C)

- Modified fork to support Copy-On-Write.
- Reducing memory allocation lock contention and improving buffer cache.
- Implemented ring buffer cache for packet control in network drivers.
- Implemented symbolic links in the file system.
- Implemented mmap and munmap functions to map files into user space.

CS144 Computer Networking (C++)

- Reproduced TCP protocol including Receiver and Sender, capable of handling packet loss, duplication, out-of-order delivery, and timeouts with retransmission, along with supporting flow control.
- Implemented network interface and ARP protocol within it.
- Implemented a simple router capable of routing and using longest prefix matching.

15-445: An Light-Weighted Single-User SQL Engine(C++)

- Implemented memory pool management, extendible hashing, and LRU-K eviction policy.
- Implemented B+ tree index, supporting concurrent insertions, deletions, and queries.
- Implemented lock management with two-phase locking and wound-wait based deadlock detection.
- Implemented index queries, sequential scans, aggregations, and insert operators.

6.5840 Distributed Systems (Golang)

- Replicated a simple MapReduce, implementing worker management, task distribution, and timeout detection.
- Replicated a standalone KV server, adhering to principles of linear consistency and idempotence.
- Replicated Raft, supporting leader election, log replication, persistence, rapid log backtracking, snapshots, etc., suitable for unreliable networks, network crashes, partitions, etc.

SCHOLARSHIPS AND HONORS

ZJU 2nd-Class Scholarship (**Top 10%**, 2020, 2021)
ZJU Outstanding Graduates(2023)
Wireless Distributed Learning Oriented Research on Model Segmentation Methods (CN115150288A)

TECHNICAL SKILLS

Languages: C/C++, Golang, (know):Python, JavaScript, Java
Systems and Tools: Linux, git, Makefile, Vim
English: TOEFL 102