XINYI ZHOU

Github: github.com/ritzzzz2021 Email: 3200104788@zju.edu.cn
Personal website: ritzzzz2021.github.io/about/ Mobile: +86 18267173285

Education

- **Chu Kochen Honors College, Zhejiang University** Zhejiang, China
  B.S. in Computer Science *GPA: 3.89/4.00 (top 5% out of 317)* *Sept 2020 - Jun 2024 (expected)*

Experience

- **Research Assistant (Remote)** University of Pennsylvania
  Supervisor: Prof. Lingjie Liu *May 2023 - Present*
  - **Project**: real-time rasterization for 3D-aware generative head avatars.
  - **Description**: synthesized head avatars with generative textures and 3D morphable model (3DMM); accelerated 3D human face synthesis with a fast differentiable rasterizer; learned how to use COLMAP for reconstruction from unknown camera poses; learned basics of graphics and 3D vision from practice; read a lot of paper about generative models, especially GANs and diffusion models for 3D generation and reconstruction.
- **Research Assistant** Zhejiang University
  State Key Lab of CAD&CG, Advisor: Prof. Weiwei Xu *Feb 2023 - Jun 2023*
  - **Project**: synergizing radiance and occupancy fields for live human performance capture.
  - **Description**: wrote scripts to reconstruct 3D human from multi-view RGBD images by applying TSDF fusion algorithm; involved in dataset collection process and learned how RGBD cameras work; learned common 3D representations, especially neural radiance fields, and followed the advances in image-based rendering.
- **Research Intern** Zhejiang Lab
  Supervisor: Hongsheng Wang *Sept 2023 - Present*
  - **Project**: sparse-view reconstruction for anime characters.
  - **Description**: implemented a special cross-attention module that improved view-dependent appearance of generated avatars; produced multi-view renderings from 3D assets to establish our dataset; did survey on text-to-image and text-to-3D diffusion models; involved in paper writing.

Projects

- **IoT thermo-hygrometer - based on ESP32 and Raspberry Pi**: programmed on ESP32 in MicroPython, read data from the sensor, DHT11, and uitilized integrated Wi-Fi module to transmit data under MQTT protocol; implemented a character device driver for Raspberry Pi OS to display the received thermo-hygrometer data on a LED matrix. Language: C, Python. (Jun, 2023)
- **Wireless ad-hoc network**: built a small wireless ad-hoc network that supports transmission and routing among STM32 MCUs; designed data packets' structure; wireless communication is supported by LoRa SX1278 module. Language: C, C++. (Jun, 2023)
- **Linux kernel - a naive implementation**: implemented a Linux kernel with basic operating system functions including trap, scheduling, paging, fork and syscall. Language: C, Assembly. (Dec, 2022)
- **EasyX - a fitness app compatible with smart glasses**: brainstormed with teammates and came up with an fitness app where users can interact with instructional videos through the sensors of smart glasses, relieving users' hands for better experience; added voice control by integrating an open source speech recognition module; implemented user interface with Android Studio; group work finished in 6-day **NUS-HCI Summer Bootcamp** of Future Interaction for Smart Glasses. Language: Java. (July, 2022)
- **MiniSQL - a simplified single-user SQL engine**: implemented a simple SQL engine that supports basic functions, including addition, deletion, search and modification; indexing is implemented to improve search efficiency. Language: C++. (June, 2022)
- **MyNote - a diary editor**: implemented a text editor for taking diary that supports quick search by date, tag or other attributes; implemented user interface with Qt; accelerated searching by utilizing database to store meta data. Language: C++. (June, 2022)

Honors and Awards

- The First Prize Scholarship, Zhejiang University (2022)
- First Prize at Chinese Mathematics Competitions, Zhejiang Division (2021)

Skills Summary

- **Languages**: Programming language - Python, C, C++, JavaScript, HTML, CSS, Java, Assembly, Shell
  Natural language - Mandarin(native), English (TOEFL: 106)
- **Frameworks**: PyTorch, React, NodeJS
- **Other Tools**: Git, Markdown, Latex, Blender, Maya, MySQL