Renyi Yang

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EDUCATION

ShanghaiTech University [web] **Shanghai, CHN**
B.ENG. in Computer Science and Technology *Sep. 2023 - Current*

- GPA: 3.79/4.0 — Major GPA: 3.99/4.0
- Rank(CS major): 16/172
- Rank(School of Information Science and Technology): 23/267

INTERNSHIP

Shanghai Azimuth Data Technology Co., Ltd. [web] *Jul. 2025 - Sep. 2025*
Software Engineer Intern

- Developed a multi-COM GNSS client that concurrently parses NMEA 0183 and RTCM 3.3 streams, displaying real-time observations, satellites status, sky plot, PVT solution, positioning precision plot, and PPS timeline in a unified UI with a console.
- Engineered asynchronous serial handling and buffered parsing to ensure lossless high-rate message processing while keeping UI updates responsive.
- Built a LAN-based simulator client (proprietary protocol) to both ingest and transmit messages, featuring live log view, ephemeris table,sky plot, NMEA sentence monitor, sats status and configurable task panel for scripted message sending to the simulator.

EXPERIENCE

Post-Moore Microelectronics and Integrated Circuit Center (PMICC) [web] *Jul. 2025 - Current*
Research Assistant, advised by Dr. Yajun Ha

- Accelerated ResNet50 inference on an in-house NPU using mlir-aie: mapped compute/dataflow, optimized tensor tiling and on-chip buffer reuse.
- Developing a high-throughput Chinese OCR pipeline for heterogeneous case files (handwritten notes, printed paragraphs, titles, stamps): layout segmentation, text line detection, script/type classification, recognition.

COURSE PROJECTS

Plants vs. Zombies [code] *May 2024 - Jun. 2024*
Personal Project

A PvZ game based on **C++** with **CMake**

- Contain basic actions, sunshine, plants and zombies
- Treat everything as a GameObject (Mother Class)

MRI Image Reconstruction [code] *Mar. 2025 - Apr. 2025*
Team Member

Reconstruct high-quality MRI images from undersampled k-space data

- Combine two independent **AttUNet** modules and a **3D ResNet**
- Dropout, dynamic learning rate scheduling and data augmentation

Pintos [code] *Mar. 2025 - Jun. 2025*
Team Leader

A simple **operating system** framework

- Threads and Synchronization

- User Program and Syscalls
- Virtual Memory (Demand Paging, MMAP)
- File System (Cache, Subdir, Extensible Files)

Fracture Fixation FEA Simulation [code] *May 2025 - Jun. 2025*
Team Member (Equal Contribution)

Fracture Fixation using **Finite Element Analysis** to simulate and optimize fixation devices
- 2D fea toolkit for bone-fixator systems
- Modeled stress transfer and callus maturation

VOLUNTEERING

Volunteer for summer and winter activities [web] *June 2023 - Aug. 2024*
Teaching Assistant

136 Hours in total
- Collaborate with the education team to provide children with diverse learning experiences and opportunities for personal growth, which uses specialized teaching methods and materials.

TECHNICAL STRENGTHS

Programming Languages	Matlab, Python, C&C++, RISC-V
Framework & Toolchain	Git, Linux, Conda
Misc	LaTeX, Markdown