ZITAN LIU

BASIC INFORMATION

Homepage https://blog.libreliu.info/
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Github https://github.com/libreliu/

EXPERIENCE

Master student, **University of Science and Technology of China** *Sep. 2021 - Present*
Working on computer graphics, mentored by Prof. Ligang Liu

Technical Artist Intern, **Netease Games** *Sep. 2020 - Nov. 2020*
Wrote resource checking and model monitoring utility for the TA group

Bachelor, **University of Science and Technology of China** *Sep. 2017 - Jun. 2021*
Major in Computer Science, TOEFL 103 (R:29, L:30, S:23, W:21)

AWARDS & PUBLICATIONS

1st place, the 7th APAC Student RDMA Competition *2019*

1st place, ISC2020 Student Cluster Competition *2020*

2nd author, RDMA-Based Apache Storm for High-Performance Stream Data Processing *2020*

PROJECTS

Reproduce Neural Radiance Caching in lighthouse2 (Link) *Feb. 2022 - Present*
Neural Radiance Caching is a work by NVIDIA in SIGGRAPH 2021. Working on implementing it in a wavefront path tracer called *lighthouse2*.

USTC Verilog OJ (Link) *Mar. 2020 - Present*
Platform for training of digital circuit design & testing, with 700+ users and 40000+ submissions. I'm one of the major contributor.

Computing cuts for high genus surfaces (Link) *Jan. 2021 - May. 2021*
Explorations on algorithms for calculating greedy homology basis on piecewise linear surfaces. Thesis for my bachelor degree.

IncludeOS ARMv8-A migration (Link) *Apr. 2019 - Feb. 2020*
IncludeOS is a Unikernel designed for C++ programming. I've finished an early stage ARMv8-A migration for IncludeOS with the help of my team members.

Apache Storm RDMA optimization (Link) *Apr. 2019 - Oct. 2019*
Apache Storm is an open-source distributed stream data processing system. As the member of the champion team in the 7th APAC Student RDMA Competition, I've participated in the RDMA optimization of inter-worker communication in Apache Storm. This work also appears in *International Journal of Parallel Programming* and I'm the second author.

OpenLaserComm (Link) *Oct. 2019 - Jan. 2020*
This project aims to build a high-speed data link in free space lasers. I've implemented PS/PL DMA, 8b/10b encoder & decoder, clocking recovery and frame synchronization on two Zybo boards (with Zynq-7000 SoC) with the help of Mingjian Wang. The laser modem part is still under construction.

TECHNICAL STRENGTHS

Broad interest in CS and EE
I'm interested in all sorts of software, how they work and why they work well (or not). I've implemented a PXE recovery utility for our computer room, packaged software in Arch User Repository, spent time figuring out how Linux From Scratch works. I take courses ranging from Natural Language Processing to Quantum Computating. I'm also interested in amateur ham radio and I got my callsign **BG6HIB** in 2019.

Ability to handle complicated software system
I've worked with several underdocumented large projects (>100k lines), in which i've managed to find the proper place to code by trial and error. I'm also getting accustomed to Maven, CMake and Conan in this process.

EXTRA-CURRICULAR

Co-organizer of the 5th Hackergame in USTC.

Speaker of 2019 Software Freedom Day Activity in Hefei, talking about build automation utilities.

President of USTC Students' Amateur Radio Club (club callsign BY6DX).