Chenxi Huang

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Education

University of Minnesota Twin Cities 2023/01 – Present

- Candidate for B.A. in Computer Science GPA: N/A
- Expected to graduate in June 2025

Nanchang University 2021/09 – 2022/12

- Candidate for B.E. in Computer Science GPA: 3.54/4.0
- A member of Generic Operational and Optimal Data(GOOD) Group, supervised by Professor Zichen Xu

The High School Affiliated to Jiangxi Normal University 2015/09 – 2021/06

- Former contestant in Olympiad in Informatics

Research Interest

- System Optimization, Operating System Kernels and Compilers
- Cryptography
- Generative Adversarial Nets, Deep Learning and Machine Learning
- Virtual Reality and Augmented Reality

Experiences

Unlike others, my computer science journey began 10 years ago. Within this decade, nearly everything I learned in computer science was taught by myself, through reading a ton of documentation, experts' blog posts, books and open source materials online. From starting projects in C# and learn Common Language Runtime when I was in elementary school, to developing VR apps, to winning a bronze medal in national contest and a gold medal in Asia and pacific, to writing an OS kernel and winning ICPC medals, these were all taught by myself.

Project - RISC-V Operating System Kernel 2022/11 – Present

A toy OS kernel that help me learn about system engineering

This project is still under construction, please forward the link to learn more details. The kernel is expected to be fully compatible with OpenSBI firmware, mutex support implemented by spinlock based on atomic operations, memory management(continuous page & object allocation), virtual memory management, process management and system call support. I plan to implement containerization on this kernel.

Project - Warehouse Management System 2022/08

Temporarily hired at a local supply chain company

Created a platform for employees to CRUD commodity information and ensure warehouse information organized in the database. Used WeChat Instant App SDK for frontend, FastAPI and MySQL for backend.

Project - CityView Virtual Reality Demo 2016/09 – 2016/11

Leader of the technology interest group at my junior high school

Using Unity3D, modelled a city landscape using 3D modelling software, optimized the demo using basic CG tricks(normal texture, level-of-detail, optimizing meshes into low-poly meshes) and programmed the logic of the demo with SteamVR SDK.

Honours

The 2022 ICPC North Central NA Regional Contest - Gold Medal 2022/04

Sophomore *University of Minnesota Twin Cities*

- 4th place in North Central NA region
- 1st place at University of Minnesota

ACM SIGBED SRC - Third Place Among Undergraduate Teams 2022/10

Sophomore *Nanchang University GOOD Lab*

- Responsible for writing and revising poster in the team

The 46th ICPC Asia Kunming Regional Contest - Silver Medal 2022/04

Freshman *Nanchang University ACM-ICPC group*

2021 China Collegiate Programming Contest, Weihai Site - Silver Medal 2021/11

Freshman *Nanchang University ACM-ICPC group*

- First CCPC silver medal in the history of Nanchang University

CCF National Olympiad in Informatics 2020 - Bronze Medal 2020/08

Sophomore *The High School Affiliated to Jiangxi Normal University*

- Representing Jiangxi Province in the annual national competitive programming contest

The 14th Asia and Pacific Informatics Olympiad - Gold Medal 2020/08

Sophomore *The High School Affiliated to Jiangxi Normal University*

- First place and only gold medal in Jiangxi province

CCF National Olympiad in Informatics Winter Camp 2020 - Bronze Medal 2020/02

Sophomore *The High School Affiliated to Jiangxi Normal University*

The 2019 ICPC Asia Nanchang Regional Contest - Silver Medal 2019/11

Sophomore *The High School Affiliated to Jiangxi Normal University*

- First place and only silver medal in Jiangxi province

Skills

- Proficient in coding and debugging C/C++, Python
- Capable of designing complicated and efficient algorithms and data structures using graph theory, dynamic programming, etc
- Capable of using Linux and other system-level tools to solve real world problems. Knowledge of maintaining backend servers(e.g. nginx) and network configuration
- Capable of implementing classic machine learning theory on cases in reality, proficient with Python; Knowledge of CNN, Transformer, and other deep learning theories, fluent in using PyTorch and other machine learning frameworks to implement AI application
- Proficient in writing .NET C#, fluent in using Unity 3D to implement 3D projects, knowledge of basic computer graphics