Yuheng WU

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Education

Shanghai Tech University, Shanghai   **Sep.2020-June 2024 (Expected)**

Bachelor of Engineering in Computer Science

- GPA 3.42/4.00
- Latest Year's GPA 3.88/4.00 (Junior Year)
- Assistant Experience: Leading Teaching Assistant of Operating Systems Course
- Awards:
- First Prize of 10th ASC (Asia Supercomputer Community) Student Supercomputer Challenge
- Successful Participant for Mathematical Contest in Modeling by COMAP (Consortium for Maths and its Applications) 2023

Project/Research Experiences

Researcher | Management System for Multi-node Cloud Computing (Chinese Academy of Science)   **June-Aug. 2023**

- Conducted an App + MySQL (multi-app deployment) experiment on Kubernets.
- Designed and implemented a scheduler in Go language for a new Cloud computing platform (CloudFlow). Function of the scheduler includes manage worker; manage applications; manage computing tasks; channel workers and tasks; clean up.

Reserve Participator | ISC Student Cluster Competition (SCC) in Quantum ESPRESSO   **Mar.-May 2023**

- Used two provided cluster (respectively Intel Xeon Platinum and AMD EPYC CPUs with Nvidia GPUs) to run profile of two inputs over 4 nodes and full PPN. Tools were ARM Forge, Intel VTune and Intel Trace Analyzer and Collector.
- Ran scalability tests on 4 nodes. Optimized 4-node-run result by tuning MPI version, adding bindings according to system architecture in core, cache, socket, etc. and combining MPI with OpenMP.
- The team finally achieved top 3 in ISC 2023 SCC.

Participator | Predicting Wordle Result (The Mathematical Contest in Modeling)   **Jan.-Feb. 2023**

- Built MLP (Multilayer Perceptron) Model by using Sklearn in Python to predict the number of reported results; coded for Grey Prediction and Polynomial Prediction for comparative uses.
- Set up a GBDT and a MLP model to produce the prediction of the distribution of reported results.
- Used K-means and KNN to classify words by distribution of tries to get word difficulty classification.

Participator | PintOS Project of Stanford University   **Sep. 2022-Jan. 2023**

- Implemented priority scheduler, priority donation mechanism, user program, virtual memory and file system on PintOS operating system which ran on 80x86 cpus with Bochs and QEMU simulator.

Intern Experience

Software Assistant | vTradEx Information Technology (Shanghai) Co., Ltd   **Jun. -Aug. 2023**

- Engaged in a IoT High-Integrated Smart Storge Application Project, responsible for function and performance testing.
- Trained to master product development process such as using designated TensorFlow framework to train projects.

Software Assistant | Shanghai Aerospace Yigen Intelligent Technology Co., Ltd   **July-Aug.2022**

- Engaged in creating a production operation management platform.
- Specified and detailed the requirement of system performance, including resource management.
- Deployed test hardware, system and system environment and conducted product test.

Miscellaneous Experience

Chief Member | Geekpie Club   **Sep. 2022-Now**

- Assign tasks, integrate exam contents and find out answers via web searching; encourage teammates.
- Responsible for DeepMD part of competition on site-achieving the best performance under power limit.
- Maintain the server of the club including fixing hardware devices, operating system installing and reinstalling.

Vice President | Chess Club   **Sep. 2020-June 2021**

- Teach the basic chess skills for the club members and organize competitions.

Skills and Interests

- Computer Languages: C, C++, Python, Matlab, Go, SQL, RISC-V
- Skills: Operating Systems, Database, Software Developing, HPC Optimization.
- Application: Visual Studio Code, Vim, Matlab, Latex, Linux Shell, Logisim, Spack, Intel Trace Analyzer and Collector, Intel VTune, Slurm, Kubernetes, Docker, QEMU, Bochs.
- Interests: Badminton, Chess