Jinyi Wan

jinyiw@utexas.edu | github.com/alice-128 | alice-182.github.io

Education

The University of Texas at Austin 2023/01 – 2023/08
Exchange, Electrical and Computer Engineering, GPA **4.0/4.0** Austin, TX, USA
- Courses: Operating Systems, Concurrent and Distributed Systems, Discrete Maths(Honors), etc.

Shanghai Jiao Tong University 2019/09 – 2024/06
B.Eng in Information Engineering, GPA 91.35/100, Rank 2/155, Core GPA 91.39/100
- GPA **95.27**, Rank **1/156**, 2022 Spring
- Courses: Data Structures(Honors), Introduction to Computer Systems(Organization), Computer Networking, etc.

Professional Experience

Microsoft Research Asia 2023/09 – 2023/11
Research Intern of Systems Research Group Remote / Beijing, China
- Conducted research on **distributed deep learning** techniques, accelerating training across heterogeneous GPU environments, enhancing computational efficiency and model performance.
- Researched on scaling up large language model training, enabling the training of substantially larger models by optimizing resource allocation and parallel processing strategies.
- Developed algorithms to identify optimal partitioning methods for parallel training.

Google 2022/06 – 2022/09
Software Engineering Intern of Gpay Team (over 67 millions MAU) Shanghai, China
- Designed and built a distributed pipeline to address crash issues in Google Pay, enhancing system reliability.
- Engineered **an automatic alert system** for the Google Growth Console, improving operational efficiency.
- Utilized FlumeJava and Java programming for the main development framework, demonstrating technical proficiency.
- Achieved large-scale data processing capabilities, handling over **1.72 million** account data in under **20 minutes** with the use of Borg for deployment.
- All code from my work has been integrated into Google's codebase and is actively used by Google staff daily.

Selected Projects

BigDL github.com/intel-analytics/BigDL **4.5k** stars since 2023/11
- Contributed to the development of high-capacity platforms, facilitating the analysis of petabyte-scale datasets using advanced analytics and machine learning technologies such as TensorFlow, PyTorch, and Spark.

PintOS CS 140, Stanford 2023/01 - 2023/04
- Expanded the capabilities of the Pintos operating system, an educational platform for x86 architecture, to include kernel-level **threading**, **user program** loading, and **file system** management.
- Implemented core operating system features such as system calls for user interaction and **virtual memory** management.

iSoccer github.com/XSiling/TalkRoom_Project_ByteDance 2022/10 - 2022/12
- Designed the overall architecture for a real-time video conferencing app, utilizing the TikTok Volcano Engine API.
- Constructed the app interface using ViewPager2, Fragment and LiveModel, facilitating seamless user experience.
- Won the **1st** place at the 2022 Mobile Application Development Competition within SJTU

ICS labs github.com/Alice-182/ICS_Labs , 2022/03 - 2022/05
- Streamlined assembly code and modified instruction sets for improved pipeline performance in Architecture Lab.
- Boosted cache efficiency with loop restructuring and data alignment in Cache Lab.

Skills

Programming Language: C/C++, Python, Java, SQL, Shell, Protocol Buffers
Framework: PyTorch, Apache Spark, CUDA, Flume, SpringBoot
Software and Toolkit: Git, Android Studio, Azure, Docker, LaTeX
Language: Mandarin, English