Yuchen Liu

LinkedIn | Github | yuchen98@g.ucla.edu | Personal Site

Skills Set

Programming languages: Python(6 yoe), Golang(2 yoe), C/C++, Java, Bash
Infrastructures and Tools: Jenkins, AWS, GCP, Docker, Kubernetes, Linux, Postman, LDAP, NFS, VCenter
Others: MySql, Redis, Latex, PyTorch, React, Groovy, Ginkgo framework, JIRA, Git

Professional Experience

MemVerge, Inc May. 2023 - Now
Software Engineer Milpitas, CA

- Led the design and implementation of an automation framework for an AI infrastructure product in **kubernetes**, to rigorously validate the end-to-end behaviors of our scheduler. Engineered intelligent deployment across on-prem servers and AWS, optimizing scalability to support 10k **Rancher** clients in interacting with multiple clusters concurrently.
- Maintained the integrity and quality of a cloud service product, supported on **AWS cloud** and **GCP**, by diagnosing and reporting software issues, managing **10 release cycles** annually.
- Developed three regression test frameworks in **Python** and **Golang**(Ginkgo framework), integrating with multiple cloud CDKs, product Restful APIs, **containerized** environment and machine learning libraries like **Tensorflow** and **PyTorch**.
- Developed comprehensive test plans and lead cross-functional test cases for feature, performance, and end-to-end system tests in **Python**, **Golang**, **Bash**. Execute across 4 cloud vendors, such as **AWS**, and 50 **on-premise** servers.
- Built and optimized 3 major products **CI/CD** pipelines utilizing **Jenkins**, **Groovy** scripts, **GitHub**, **containers**.
- **Mentored** an intern, **Collaborated** cross-functionally to design scalable solutions and maintain high product quality.

Meta Platforms, Inc(Facebook) - Digital Commerce Platform Jun. 2022 - Sept. 2022
Software Engineer Intern Menlo Park, CA

- Redesigned and developed payout settlement algorithm, reconciling daily transactions discrepancy of **$80000** and resolving **tens of thousands of failures** over the year. Integrated **Python** and **MySQL** handlers into **C++** codebase.
- Developed algorithms to categorize transaction discrepancies across 3 platforms (Facebook, Google/Apple). Utilized **Python** for data processing and exported aggregated outcomes to 3 relational databases.
- Automated data analysis to compare product ledgers with payment platform ledgers, identifying instances of user fraud.
- Set up an alert service for the immediate detection of financial inconsistencies arising from fraud or system flaws.
- Wrote 2 **design documents** and conducted intern presentations, disseminating insights to the team.

Neusoft Group Apr. 2019 - Sept. 2019
Software Development Intern Dalian, China

- Led a team of 4 in coding and constructing a smart home **Internet of Things** management system from physical to application layer.
- Compiled on a follower computer to collect data from sensors at home, realized communication between follower computer and personal computer with **ZigBee** technology. Ran **Assembly language** code in **IAR**.
- Formulated a user-friendly desktop UI to display information with **Qt** and control household appliances with **C++** handlers, extending functionality to web page and WeChat applets with **HTML**, **CSS** and **JavaScript**.

Education

University of California, Los Angeles (UCLA) Mar. 2023
Master of Science in Computer Science, GPA: **3.60**/4 Los Angeles, CA

- Coursework: Software Engineering, Operating System, Machine Learning Algorithms, Large-scale Machine Learning, Data Mining, Quantum Programming, Advanced Computer Architecture, Algorithms

Dalian University of Technology Jun. 2020
Bachelor of Electronic Information Engineering, GPA: **3.86**/4 Dalian, China

- Coursework: Probability and Statistics, Complex Variable Function, Information Theory, Principles of Communication

Course Projects

CS Master Capstone Project Sept. 2022 - Mar. 2023
CNN Compression Based on Collaborative Compression Method

- Using **PyTorch**, pruned channels of the pre-trained **ResNet-56** to desired ratio in the guide of Collaborative Compression, fine-tuned the model for 100 epochs, loaded the model and evaluated on **CIFAR-10** data set.
- Analysed the compression ratios of 27 convolutional layers, pruned only every 3 layers, fine-tuned variations of compressed ResNet-56 and tested the differences of test accuracy after pruning each 3 layers.
- Discussed pros and cons of collaborative compression strategies and proposed various pruning approaches.