Yuchen Liu

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

Skills Set

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

Professional Experience

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

- Maintain the integrity and quality of a cloud service product, supported on **AWS cloud** and **GCP**, by triaging and reporting software issues, successfully managing **10 release cycles** in a year.
- Design and implement 2 regression test frameworks in **Python** and **Golang**, integrating with 3 **cloud dev kits**, utility libraries, **container** images and machine learning libraries like **Tensorflow** and **PyTorch**.
- Develop comprehensive test plans and lead cross-functional test cases for feature, performance, and end-to-end system tests in **Python**, **Golang**, **Bash**. Execute across diverse environments, such as **AWS cloud** and **on-premise** servers.
- Design and deploy **CI/CD** pipelines utilizing **Jenkins**, **Groovy** scripts, **GitHub**, **containers**.
- **Mentor** an intern, **Collaborate** across teams to uphold high-quality standards of products.

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 platforms (Facebook, Google/Apple). Utilized **Python** for data processing and exported aggregate outcomes to **Relational** databases.
- Gathered compelling evidence for potential financial irregularities, highlighting potential user fraud.
- Facilitated immediate detection of significant financial inconsistencies that could arise from fraud or **system flaws**.
- Authored two **design documents** and conducted intern presentations, effectively 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, AlgorithmsYuchenYuchen

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 pretrained **ResNet-56** to desired ratio in the guide of Collaborative Compression, finetuned the model for 100 epochs, loaded the model and tested it on **CIFAR-10** test set.
- Analysed the compression ratios of 27 convolutional layers, pruned only every 3 layers, finetuned variations of compressed ResNet56 and tested the differences of test accuracy after pruning each 3 layers.
- Discussed pros and cons of collaborative compression strategies.

Quantum Programming in Cirq Jan. 2022 - Mar. 2022
Professor J. Palsberg, UCLA CS238 t.ly/A1-X

- Implemented famous quantum algorithms, Shor's and QAOA, with Google's **Python** library, **cirq**.
- Wrote a basic **OpenQASM** file parser to reconstruct quantum circuits in cirq.
- Ran cirq quantum circuit on **IBM** qunatum machine via translating cirq into **OpenQASM**.