

Yuehan Lian

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Education

Beijing Forestry University

Beijing, China 09/2018– 06/2022

B. Eng in Computer Science and Technology (**Innovation Class**), selected as **top 20** students in CS major.

- **GPA:** 84.69/100, **IELTS:** 6.5 (L: 7.5 R: 7.5)
- **Awards:** Meritorious Winner (Top 8% in the world), Interdisciplinary Contest In Modeling (ICM) 2021.
- **Courses:** Computer Architecture, Operating Systems, Computer Networks, Computer Graphics, Database System, etc.

Work Experience

Intel

07/2022 – Present

System Software Development Engineer

Beijing, China

Granite Rapids Workstation Simulation

- Supported chipset swaps top blocks in **SPI** flash and **BIOS** for fault-tolerant boot block update with resiliency. Completed the transition of system power states (S0 ~ S5) in boot cycle referring to **ACPI** specification.
- Accomplished and validated the connection of system-on-chip (**SoC**) and multiple components in chipset via Enhanced Serial Peripheral Interface (**eSPI**) channels, accelerating **pre-silicon** simulation in **Simics** for Intel® Xeon Workstation.
- Diagnosed failed or skipped test cases of Data Plane Development Kit (**DPDK**) networking driver and Turbo Intel® IP.
- Collaborated seamlessly with cross-regional teams on debugging Simics models and reviewing hardware architecture.

Quantitative Research Platform

- Developed and deployed user-friendly frontend and backend interfaces with **React** and **Node.js**.
- Facilitated daily updates of stock and index data. Enabled efficient data querying capabilities with **ClickHouse**.
- Implemented support for user-submitted expressions to perform factor calculations with **Python**.
- Supported and dockerized web service with **Celery**, **RabbitMQ**, **Flower**, **Flask**.

Tencent

07/2021 – 09/2021

Software Engineer Intern

Shenzhen, China

- Developed data interfaces and unit tests. Deployed service on cloud containers using **trRPC**, **Kubernetes**, and **MySQL**.
- Containerized Tencent Cloud Content Delivery Network (**CDN**) configuration center environment with **Docker**.
- Deployed **Prometheus** and **Grafana** to visualize performance, API call success rate, and database request error rate.
- Manipulated more than **7 million** records of CDN customers. Increase **14%** query speed by restructuring.

KnownSec

02/2021 – 05/2021

Software Engineer Intern

Beijing, China

- Implemented backend for P4 target traffic filter running on Barefoot switch, interacting with Tofino **ASIC** chip.
- Provided **Restful APIs** with **Golang**, **gRPC**, and **MongoDB** for monitoring and managing network ports.
- Utilized **Python** package **scapy** to create IPv4/IPv6/VLAN packets, as well as sniff or filter packets to automate unit tests.
- Investigated Barefoot Context interface failures due to concurrency with **GDB** when multiple ports are updated.

Research Experience

A Resource Optimal Deployment Based on P2P Network

11/2021 – 05/2022

Beijing Forestry University, Supervised by *Prof. Dongchen Jiang*

Bachelor Thesis

- Designed and implemented a **P2P file system** utilizing distributed hash tables and the **Kademlia-based RPC protocol**.
- Utilized **Docker Compose** for easy system execution. Enabled users to upload, retrieve, add neighbors, and view files.
- Implemented **collaborative filtering** algorithm to enhance file resource recommendation with **Golang**.
- Increased hit rate by **16%** over P2P networks without recommendation, using MovieLens dataset.

Technical Skills

Programming Language: C, C++, Verilog, System Verilog

OS & Virtualization: Linux Kernel Development, KVM, QEMU, Gem5, Simics

Program Analysis: LLVM, Klee, Yosys, Pyverilog

Others: Full-stack web development, SQL/NoSQL databases, R, Matlab.