
Education

M.S. in Computer Science at UC San Diego

Sept. 2018 - Dec. 2019

B.E. in Computer Science at Shanghai Jiaotong University

Sept. 2014 - Jun. 2018, GPA 3.7/4.3 @ Top 30%

Relevant coursework: Computer Architecture, Computer Networks, Database, Operating System

Work Experience

Dev Intern at Pygmal Technologies

Feb. 2017 - Jan. 2018

- Developed a desktop environment for VR devices & a CPU-based real-time ray tracer
- Involved with Chromium Embedded Framework (CEF), DirectX, Embree. Used perf and cachegrind to analyze and optimize performance through manual vectorization/precomputation/interface refactor
- Improved the fps of VRDE by 60%. Managed to make the ray-tracer render scenes in 720p/60fps.

Dev Intern at Ant Financial, Alibaba Group

Jun. 2016 - Sept. 2016

- Contributed to an internal Docker-based container platform, Ant Container Service
- Developed an orchestration module similar to docker-compose in Go for single machine with Docker API.
- Module integrated into the production system, handling the lifetime of over 1k containers on financial cloud

Projects

Go AI

Leader of a group of four, class project

- Implemented a Go AI based on AlphaGo's first paper with UCT tree search and a policy neural network.
- Responsible for board class, UCT search as well as communication module with Protobuf-based serialization in C++ and Python.
- Beated Facebook's DarkForest(1st ver.) and GNU Go.

Compile-time Static Map in C++ for Boost library.

Individual contribution to open-source project, as a proposal for Boost GSoC 2017

- Implemented a static_map class for C++ Boost library
- This library supports compile-time lookup with a given key with no runtime overhead.

SJTU Open-Source Mirror Site

Organization open-source project

- Developed the frontend/backend/infrastructure of a mirror site from scratch
- Implemented the syncer in Go with structured logging/metrics reporting, the frontend in Vue as a SPA. Logs sent to ELK stack at logz.io and metrics collected into Prometheus. Deployed with docker-compose with resource isolation. Errors monitored will be reported to Telegram channel.
- Served over 150k+ requests every day with >99.9% availability

Awards & Publication

Conference paper: *BAHS: A Bandwidth-Aware Heterogeneous Scheduling Approach for SDN-based Cluster Systems*, Zheng Luo, Jingyun Shen (coauthor), Chentao Wu, Jie Li on ISPA 2017

Patent: *An Analysis on Academic Big Data Based on Paper References*

Skills

Production-level C++14/17 and Go
Linux system programming

Micro-optimization and profiling
Docker usage and implementation