Xinyuan Liang

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SUMMARY

Software engineer with one year of professional backend development experience. Experienced in big-data processing, building highly available and maintainable systems. Passionate about computer systems and visual computing.

SKILLS

Languages: Go, C++, Python, Java, Haskell, SQL
Tools: Clickhouse, Hive, Flink, Kafka, Elasticsearch, BI Platform, Docker, Kubernetes, OpenGL(GLSL)

EDUCATION

University of California, San Diego (UC San Diego) — **San Diego, United States**
M.Sc in Computer Science and Engineering; GPA: **4.0**/4.0 — *September 2022 – March 2024*

South China University of Technology (SCUT) — **Guangzhou, China**
B.Eng in Computer Science and Engineering; GPA: **3.8**/4.0 — *September 2017 – June 2021*
Honors: Excellent Academic Performance Scholarship, "Seles" Enterprise Scholarship

University of California, Berkeley (UC Berkeley) — **Berkeley, United States**
Berkeley International Student Program (BISP); GPA: **3.6**/4.0 — *August 2019 – December 2019*

Coursework: Operating System, Networked Systems, Computer Graphics, Image Synthesis, etc.

WORK EXPERIENCE

Kuaishou Technology — **Beijing, China**
Backend Developer, System and Infrastructure Department — *July 2021 – August 2022*

- Developed new features to the CI/CD platform with **Go and Python**, and supports 10K engineers with 420K daily live changes in the company
- Constructed a data warehouse on **Clickhouse and Hive** by collecting, processing, storing, and visualizing billions of real-time data from CI/CD pipelines with **Kafka and Flink**, which is widely used among the company and supports analysis of efficiency bottlenecks of the change process; Implemented with **Go** and **Java**
- Enabled simultaneous multiple feature deployment on the production environment for independent A/B testing and shortened the average deployment and verification life cycle to **50%**
- Promoted the quality of online changes by evaluating, storing, and visualizing the grades of service change execution on **Elasticsearch** according to the implementation of the changes standard and successfully reduced the failure rate by **74.56%**, from 1.73‰ to 0.44‰
- Built the backend server of the FaaS platform with **Go**, which enables developers to create, update, and deploy scalable code modules efficiently

Tencent Technology — **Shenzhen, China**
DevOps Intern, Data Management Group — *June 2020 – August 2020*

- Built Chaos Engineering System with **Go**, which aimed to discover the vulnerabilities of the **distributed systems** and improve the system resiliency
- Encapsulated Chaos Engineering toolkits as APIs to conduct experiments and make the APIs accessible through proxy outside the intranet with authentication

PROJECTS

Implementation of Path Tracing link — **Beijing, China**
Introduction to Computer Graphics – Course Project — *April 2022 – April 2022*

- Implemented a global illumination path tracer with Monte Carlo integration, BVH accelerator based on the SAH method, MSAA anti-aliasing, importance sampling, and Russian roulette for path termination; Completed in **C++**
- Optimized it with multi-threads using OpenMP, achieved a **20X** speed improvement and rendered at **3** us per ray

Design and Implementation of Autocar (SCUT) link — **Guangzhou, China**
Undergraduate Thesis Project, Advisor: Sheng Bi — *January 2021 – June 2021*

- Implemented the traffic lane detection with Pure Pursuit path tracking algorithms based on slide window and polynomial curve fitting; Mainly built with **C++** on **ROS**
- Realized real-time perception of traffic lights and traffic signs with self-training YOLO v5s model, achieved **30** FPS with **92%** mAP_0.5
- Utilized laser radar to detect the baffles that the Autocar drives through
- Honored with the Bronze Award in the 7th China International College Students' "Internet+" Innovation and Entrepreneurship Competition