

Zichang Gao

gaozichang@hotmail.com | [linkedin.com/in/zichang-gao](https://www.linkedin.com/in/zichang-gao)

EDUCATION

Brown University

09/2021 — 05/2023

Master of Science in Computer Engineering (GPA: 4.0/4.0)

Providence, RI

- Courses: Operating Systems, Distributed Systems, Computer Systems, Machine Learning, Image Understanding, Scientific Programming in C++

Dalian University of Technology

09/2016 — 06/2020

Bachelor of Engineering in Automation

Dalian, China

- Core Courses: C Programming, Data Structure, Principles of Computer, Control Theory, Digital Circuit and System

WORK EXPERIENCE

Brown University

03/2023 — 05/2023

Teaching Assistant

Operating Systems

- Required a comprehensive understanding of curriculum, assignments, and projects.
- Collaborated actively in weekly meetings, analyzing coursework and providing feedback to the professor.
- Conducted informative TA sessions, proficiently assisting students in debugging projects, offering suggestions, and explaining homework concepts effectively.

Amazon

05/2022 — 08/2022

Software Development Engineer Intern

Luna, Data Intelligence Team

- Developed automated **data pipelines and ETL jobs** using **PySpark, AWS Glue, S3, and Redshift** to help analyze service quality based on IP and user geolocation.
- Implemented unit-tested **PySpark** scripts to ensure data quality and optimize query performance.
- Automated data pipelines using **AWS Lambda, EventBridge, and Step Functions**.
- Built an **Amazon QuickSight** dashboard for visualizing service operations.
- Facilitated efficient analysis and decision-making by unblocking location and ISP-related service quality analysis for the team.

Intel

07/2020 — 12/2020

Software Engineer Intern

NSG DMTM Automation Team

- Developed web applications using **C#, .NET Web APIs, Angular, jqWidgets, and SQL Server**, optimizing manufacturing process configuration across departments.
- Integrated advanced features such as multi-editor support, conflict resolution, trace-back, and data manipulation APIs into the applications.
- Enhanced the performance of the database by implementing SQL stored procedures.
- Successfully deployed the solution into production, facilitating better coordination and efficiency within the organization.

PROJECTS

Raft

05/2023

Golang, gRPC

- Built a fault-tolerant distributed Key-Value storage system with the Raft consensus algorithm.
- Fully based on the paper, achieved leader election, log replication, and log commitment.

Brown CS169 Lab: Weenix - A Unix-like fully functional operating system

05/2022

C, GDB, Makefile

- Built key OS components, including processes, threads, scheduler, drivers, virtual file system, System V File System, virtual memory, and page fault handler.
- Implemented system calls from bottom to top, including **fork, mmap, brk, waitpid, read, write, link**.

VRML 3D Model Visualizer

12/2021

C++, STL, EIGEN, CMAKE

- Designed a VRML Tree structure parser.
- Supported model visualization, transformation, normal vector calculation, and surface reconstruction.

SKILLS

Programming Languages

C/C++, C#, Python, Go, JavaScript/TypeScript, SQL, HTML

Framework and other

PySpark, Angular, ASP.NET, Git, CMake, Qt, SQL Server, Docker, L^AT_EX