

# Xingjian Hao

Email: xingjian\_hao@brown.edu | Cell: +1(979)255-8096

LinkedIn: <https://www.linkedin.com/in/xingjianhao/> | GitHub: <https://github.com/PTJohn0122> | Website: <https://xjhao.studio/>

## Education

**Brown University**, Providence, Rhode Island

August 2022 - December 2024

*ScM in Electrical and Computer Science*

- Professional track interest in Computer Engineering

**Texas A & M University**, College Station, Texas

August 2018 – May 2022

*Bachelor of Science, Major in Computer Engineering, Minor in Economics*

- Honors: Dean's List, Grand Challenge Scholar Program

## Experience

**[Most Recent] DJI Technology Co. Ltd.**, Los Angeles, CA

*Software Engineer Intern - Full Stack, related skills: Go, Python, C++, Typescript, Vue.js, MongoDB*

July 2023 - Jan 2024

- Contributed to **CICD** pipeline development for the ALAM team of the automotive division, adopting **Agile** practices.
- Developed and integrated **5+** full stack features using **Gin, Vue, Typescript, and MongoDB**, streamlining data collection and authentication processes to enhance module efficiency.
- Designed and implemented an autonomous update data stream to **Siemens Polarion** for **ISO26262** authentication, simplifying procedures for authentication and enhancing data reliability.
- Managed large scale database with **3D geometry data** and pipelined testing automation for **3** module artifacts using message queue and testing frameworks.
- Scaled platform testing capacity from **2** to **11** using **Kubernetes**, improving infrastructure resilience and continuous delivery capabilities.

**Gridsum Holding Inc.**, Beijing, China

*Software Engineer Intern - Backend, related skills: Python, Java, Kubernetes, FastAPI, Machine Learning*

May - July 2023

- Improved SaaS Big Data platform with ML operator implementation and dependency management, reducing adaptability issues.
- Enhanced microservice architecture using FastAPI and Kubernetes, reducing deployment times by 30% via Continuous Delivery integration using **Jenkins, Spinnaker, and Kubernetes**.
- Trained and deployed clustering models for solar panel monitoring, boosting client-server performance and data I/O
- Collaborated across teams to redesign data mapping methods for ML operators, boosting performance and facilitating agile, client-focused software enhancements.

**Inspur Group**, Bellevue, WA

*Software Engineer Intern, related skills: C++, Python, Kubernetes, Ceph, Cloud Native*

June – August 2021

- Streamlined Objective Oriented Storage(**OSS**) cluster deployment in North China Business Region, integrating Continuous Delivery and Agile methods.
- Optimized **OSS SDK** in C++, Python and expanded features of **RESTful API**, reducing data retrieval times by **17%** while enhancing system efficiency and client satisfaction. Documented updates with Markdown.
- Created a life cycle monitoring feature for the **Ceph + Rook** cloud-native system, improving data security by **40%**. This innovation was recognized by the BU manager.

## Projects

**Weenix: Virtual Machine Operating System Kernel**

*Personal Project, Repository, relate skills: C/C++, Objective-C, Linux/Unix, System Kernel, Drivers*

January - August 2024

- Built an operating system kernel for virtual machines from scratch using **Objective-C**.
- Enhanced threading library capability for multiple kernel threads by engineering context switch for **lightweight process(LWP)**.
- Wrapped drivers for characters and blocks, enabling data transmission I/O in the virtual environment.
- Constructed **System V File System(S5VFS) interface** following unix file system architecture, supported **memory caching**.
- Reduced kernel workload using Dynamic Linking on virtual memory mapping and process forking.

**Modist: Distributed Database Management System**

*Lead Developer, Repository, related skills: Golang, Docker, gRPC*

January - May 2023

- Implemented distributed database management system in **Golang**, leveraging **gRPC** and **BoltDB**
- Deployed a single-leader **Raft** algorithm across multiple partition groups, ensuring linearizable consistency and fault tolerance, supporting continuous delivery and system resilience.
- search efficiency within a large-scale cluster using a DHT-based routing mechanism, significantly reducing node storage costs and improving scalability.
- Implemented partitioning on a **consistent hashing** scheme to manage heavy query workloads, maintaining system scalability and supporting Agile methodologies.
- Collaborated closely with the testing team on unit tests, achieved **93.1%** of code coverage.

## Skills

**Programming Languages:** C/C++, Python(Pytorch/Tensorflow), Go, Java, JavaScript/Typescript, MATLAB

**Web Frameworks:** Gin, gRPC, Flask, FastAPI, Node.js, Vue.js, Django

**Databases:** MongoDB, PostgreSQL, MySQL

**Tools:** Git, Docker, Kubernetes, Jenkins, Heroku, AWS, GCP, Redis, CUDA