Ruipeng (Ray) Han

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EDUCATION

University of Illinois Urbana-Champaign — **Expected Dec 2024**
Master of Computer Science — GPA: 3.95/4.0

University of Illinois Urbana-Champaign — **Aug 2019 - May 2023**
B.S. with Highest Distinction in Math and Computer Science and Statistics — GPA: 3.95/4.0
Coursework: Parallel Programming, Data Structures, Database Systems, Distributed Systems, Networks, Compilers
Machine Learning, Deep Learning, NLP, Signal Processing, Internet of Things, Computer Vision, Web Programming

TECHNICAL SKILLS

Languages: C++, Python, Golang, JavaScript/TS, C, C#, Java, R, SQL, Linux Shell, HTML5&CSS
Frameworks: Django, Flask, React.js, Next.js, Node.js, Express, Java Spring Boot, gRPC, FastAPI, Hadoop
Developer Tools: Docker, Git, Gitlab, Github, VMware, GCP, AWS, Postman, MongoDB, Neo4j, PostgreSQL, CUDA

PROFESSIONAL EXPERIENCE

Software Engineer Intern — May 2024 – Aug. 2024
Pure Storage Inc. — Santa Clara, CA
- Upcoming Intern

Teaching Assistant (Database Systems, Software Development Methods) — Aug 2023 – Present
Computer Science Department, University of Illinois at Urbana Champaign — Champaign, IL
- Developed and delivered comprehensive course materials on MongoDB, Neo4j, database indexing, and transactions, including crafting assignments, quizzes, and exams. Conducted weekly office hours to support student learning
- Created and maintained the course website, enhancing the learning infrastructure. Automated homework grading through the development of a Python-based auto-grader, streamlining the assessment process

Software Engineer Intern — May 2022 – Aug. 2022
Foxconn Industrial Internet (FII-USA) — Mt. Pleasant, WI
- Led the design and development of RESTful APIs using **FastAPIs** to retrieve real-time IoT machine data from the production line, enabling seamless integration with user and client applications and effectively handling 10K+ daily requests
- Developed microservices architectures using **Django-REST framework** that communicated with Microsoft Graph APIs and provided access to Microsoft cloud services, including emails, Teams messages, cloud communications, and search functions

Software Engineer Intern — May 2021 – Aug. 2021
Foxconn Industrial Internet (FII-USA) — Mt. Pleasant, WI
- Developed and maintained an ERP web application using **Django** and **React.js** with **PostgreSQL** databases, automating human resources' business workflow and affairs, including form approvals, production planning, document management, etc
- Implemented an admin portal to visualize thousands-scaled sales forms and materials documents, enhancing business analysis
- Implemented health checks and monitoring mechanisms in **HAProxy** to constantly monitor the availability and responsiveness of web servers, automatically routing traffic away from underperforming servers and ensuring 99.999% host uptime

IT Technician Intern — May 2020 - Aug. 2020
AFE Inc.(Foxconn Technology Group) — Mt. Pleasant, WI
- Collaborated with system engineers to optimize PostgreSQL replications, load-balancing protocols, and failover performance. Achieved 30% latency reduction, enhancing data sync between primary and standby databases
- Leveraged **GitLab CI/CD** and developed shell scripts to automate deployments, server updates, testings, and database migrations and failovers, enhancing the DevOps cycle and continuous integration efficiency under Linux OS.

PROJECTS

Distributed Machine Learning Computing Scheduler
- Developed a fault-tolerant distributed file system in **Golang** using **gRPC**, enabling efficient file operations such as fetching, deleting, and uploading files while ensuring system reliability
- Implemented the **Bully Algorithm** for automatic master node election, providing seamless failover capabilities in case of master node failures, ensuring uninterrupted system functionality

lc-gg (Full-stack Development)
- Designed and developed an online group-study platform for Leetcode in **Next.js** and **MongonDB**, deployed using **Vercel**
- Leveraged Leetcode's API to fetch user statistics, providing users with up-to-date information to aid in their preparation