

Junshang Jia

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Education

Carnegie Mellon University

Aug 2023 – Jan 2025(Expected)

Master of Science in Information Networking, GPA 4.0/4.0

Pittsburgh, PA

Courses: Computer Systems, Machine Learning, Distributed Systems

No sponsorship needed

University of Pittsburgh

Aug 2019 – May 2023

Bachelor of Science in Computer Science GPA: 3.91/4.0

Pittsburgh, PA

Courses: Operating Systems, Artificial Intelligence, Functional Programming

Work Experience

Ericsson

Jun 2021 – Sep 2021

Software Developer Intern

Beijing, China

- Conducted and accomplished a cutting-edge, web-based management system to optimize product development lifecycle of 5G radio base stations and increase overall product quality by leveraging **Java**.
- Designed an ER diagram based on thorough product documentation, accomplishing a **MySQL** database with optimized indexing and schema design, resulting in a **40%** increase in database query performance.
- Developed a dynamic web application leveraging **Spring Boot** framework and **RESTful APIs** allowed users to manage millions of data by CRUD operations.
- Engineered highly interactive frontend visual interfaces by **React** and Antd framework, incorporating dynamic features to enrich user interactions in search and information checking behaviors.

Projects

Memory Allocator

Jun 2023 – Sep 2023

- Designed and implemented a memory allocator from scratch for efficient memory management using **C**.
- Applied various strategies(segregated free list, explicit lists, and memory alignment) to mitigate fragmentation.
- Created a robust and efficient memory allocation algorithm outperformed existing solutions by improving throughput memory utilization by an impressive **70%**.

Proxy Server

Jun 2023 – Sep 2023

- Constructed a multi-threaded proxy server in C to manage user requests, process data, and deliver web content.
- Leveraged advanced **socket programming** techniques and harnessed the power of the **POSIX** Threads library, ensuring seamless concurrent handling of client requests without race conditions.
- Optimized server performance by deploying caching mechanisms, resulting in an **80%** reduction in response time.

Opensoundscape

Jun 2022 – Sep 2022

- Contributed an **open-source machine learning library**, Opensoundscape, allowing users to select the magnitude or power of Spectrogram and generate specific formats of annotation files employing **Python**.
- Constructed a comprehensive set of meticulous test cases to ensure thorough **testing** of software functionalities and identify any potential bugs or issues may arise during development process.
- Collaborated with team members in development process by posting pull requests and engaging in discussions to review and enhance code quality and project outcomes.

Metis

Sep 2021– Dec 2021

- Built a forum to help people better judge whether information is misinformation in React and Python.
- Utilized React to develop an intuitive and responsive login page, seamlessly integrating a Google account login. feature using **Google APIs**, enhancing user convenience and authentication options.
- Implemented comment features using **Flask** and **NoSQL**, allowing users to reply, vote, and discuss.

Skills

Programming Languages: Java,C/C++,Python(PyTorch,Pandas,Numpy), SAS,TypeScript, SQL,HTML/CSS, Go

Web Technologies: React.js, Node.js, Angular, NoSQL, MySQL, MongoDB, PostgreSQL, Spring Boot, Flask

Tools: Linux, Git, Bash/Shell, AWS, Azure, Google Cloud, VS Code, Docker