

Xianjie Zheng

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Education

Carnegie Mellon University

Master of Science in Electrical and Computer Engineering

Coursework: Advanced Cloud Computing, Distributed Systems, Web Application, Machine Learning

Pittsburgh, PA

Expected Dec 2021

University of Wisconsin-Madison

Bachelor of Science: double major in Computer Sciences and Applied Mathematics

5-time Dean's List award winner, Peer Mentor in Operating System class

Madison, WI

May 2020

GPA: 3.85/4.0

Skills

- Programming Languages: Java, C, Python, MATLAB, Julia, Bash, C++, HTML, JavaScript
- Technologies: Apache Spark, AWS, Ajax, Dagger, Docker, Django, GitHub, GDB, Reactjs, React Native

Work Experience

Google LLC.

Software Engineer Intern – Assistant on Android Auto

Mountain View, CA

May 2021 - Aug 2021

- Built an internal debugging feature using Dagger that provides structured logs about query responses from the Assistant servers, and made it compatible with a manageable and lightweight platform.
- Equipped the production code with comprehensive test suites and a detailed design doc which guarantees robustness in its daily work serving around 70 engineers.
- Contributed to the integration of an improved Text-to-Speech library in the auto platform to optimize the response latency for Assistant queries, benefiting all clients.
- Identified an existing structure design issue in the codebase and committed a new solution, reducing the response latency by 50% for large data load.

Rokid Corporation Ltd.

Algorithm Intern

San Carlos, CA

May 2019 - Aug 2019

- Investigated an existing third-party API in AR and documented its function features to apply in future cases.
- Integrated the API into an Android demo application and benchmarked its performance with competing solutions.
- Built 10+ ready-to-use Docker images with different configuration environment using Dockerfile and managed them within a docker image registry on a private server.
- Deployed the VLAD algorithm onto Docker Swarm and upped its efficiency by 10% via implementing its core K-Means algorithm in PySpark.

Academic Projects

Distributed File-Caching Proxy (Java)

Spring 2021

- Designed a caching protocol capable of robustly handling remote procedure calls (RPCs) from concurrent clients.
- Adopted the check-on-use strategy, open-close session semantics on concurrent file access to server files so that it provides C file operation semantics for clients.
- Applied LRU cache eviction policy to reduce latency and total data transfers.

Spark-boosted Data Processing (Apache Spark, AWS)

Spring 2021

- Developed a distributed program with PySpark to process a large corpus of web crawled data through a process known as extract, load, and transform (ELT) and deployed it on AWS EC2 instances.
- Optimized its performance by minimizing data shuffling during transformations so that it can process 50 GB data within 80 minutes, using 8 workers.

Carcassonne – Java GUI Board Game (Java)

Spring 2021

- Analyzed and designed a board game with domain models, sequence diagrams, and object models using UML.
- Implemented its core features with unit-testing and Swing-based GUI using Object Oriented Design principles.

RumbleSpace - Nano Blogging Platform (Python, JavaScript)

Fall 2020

- Developed a nano blogging site using Django framework and deployed the application on AWS EC2 server.
- Implemented Django Models to store posts/comments and user profile information and managed them with MySQL.
- Adopted Ajax to refresh page automatically when new posts/comments are created.