

Jiahao Guo

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EDUCATION

Carnegie Mellon University

Pittsburgh, PA

Master of Science in Electrical and Computer Engineering (GPA: 3.9/4.0)

Dec. 2025

University of California, Irvine

Irvine, CA

Bachelor of Science in Computer Science (GPA: 3.9/4.0)

Jun. 2023

SKILLS

Languages: Python, Java, C/C++, TypeScript, JavaScript, SQL, HTML/CSS, Go, Shell

Frameworks: React, Node.js, Django, Flask, JUnit, Spring Boot, Ant Design, FastAPI, Redux, Flutter, Fabric.js

Developer Tools: Git, Docker, Google Cloud Platform, VS Code, AWS, Jenkins, Nginx, Redis, Kafka, Apache Spark, Apache Hadoop, HDFS, Elasticsearch

EXPERIENCE

Software Engineer Intern

May 2024 – Aug. 2024

Meituan

Shanghai, CN

- **Refactored Multi-platform System** using **Spring Boot** and **Spring Cloud** with a microservices architecture, integrating over 20 services. Designed load balancing with **Eureka** and centralized error handling
- **Enhanced Query Performance** by optimizing **PostgreSQL** with combined indexing. Improved execution times under heavy loads and ensured data integrity across key microservices
- **Developed Visualization Framework** with **HTML5 Canvas** and **Fabric.js** for node-based visualizations, supporting dragging, linking, and dynamic updates
- **Implemented Adaptive Form Management** using **HOC** and **React Context API**. Created conditional form generation based on server-driven data, enabling flexible handling of varying inputs
- **Improved Frontend State Consistency** with **Redux-Saga** to control asynchronous flows. Applied **Optimistic Updates** for immediate changes, syncing with backend confirmations

Software Engineer Intern

Aug. 2023 – Jan. 2024

Douller LLC

Tampa, FL

- **Developed a Frontend for Trading App** using **Dart** and **Flutter**, leveraging **Provider** and **Riverpod** for state management across dynamic pages. Applied **lazy loading** to cut initial load times by 20%, improving navigation efficiency for multi-layer transitions
- **Optimized Backend with Express and Redis Caching** by building a **RESTful API** with modular routing and middleware. Integrated **Redis** to cache frequently accessed product lists and user sessions, reducing database query frequency by 40% with a **TTL-based strategy** to refresh stale data automatically
- **Refactored MongoDB Schema** to support evolving business, restructuring models, and optimizing indexes. Enhanced query efficiency by refining aggregation pipelines, which reduced 30% query processing time
- **Enhanced Search with Elasticsearch** by redesigning index configurations for multi-field full-text searches. Improved filtering based on product attributes like description and category allows users to narrow results

Software Engineer Intern

Jul. 2022 – Aug. 2022

EdgeDevice.AI LLC

Redwood City, CA

- **Designed a Spark-based Data Pipeline** to process incoming Kafka streams with distributed transformations for data cleansing and aggregation. Managed 500,000 records per minute using **Spark SQL** for joins and synced results with **MySQL** to enable real-time analytics and storage
- **Optimized Data Flow with Kafka and Spark** to handle streaming and batch workloads. Used window-based streaming in **Spark** to analyze real-time chunks, processing updates in seconds and automating synchronization with **Kafka Connect**
- **Preprocessed Big Data with Apache Hadoop** using MapReduce to clean and standardize multi-source datasets. Developed mappers and reducers to filter and normalize 5 TB of financial data
- **Configured HDFS for Scalable Storage** to manage distributed datasets. Set up storage strategies in **HDFS** that supported integration with other systems, handling up to 100 TB monthly

PROJECTS

Interactive Kids Game Website | Python, Flask, React, MongoDB, GCP

Apr. 2023 - Jun. 2023

- Led a team of 5 to develop a Kids' Game Website using **Flask** and **React**, creating engaging educational games
- Consolidated **MongoDB** with **TTL** indexes for effective session management and automated CI/CD pipelines with **GitHub Actions**, deploying on **Google Cloud Platform**