

Ethan Zhu

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Skills

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

Frameworks and Tools: Spring Boot, Node.js, Nest.js, Express.js, Hono.js, Django, FastAPI, Next.js, Redis, RabbitMQ, Kafka, React.js, Zustand, TailwindCSS, MySQL, PostgreSQL, MongoDB, tRPC, Nginx, Junit, Spark, Hadoop, Joblib, Ray, Dask, Linux/Unix CLI, Shell Scripting, Git, Docker, K8S, Jenkins, GCP, AWS EC2

Experience

Full Stack Software Engineer - SiengDart LLC.

Aug 2024 – Nov 2024

Accounting and Project Management Platform

Newark, Delaware

- Reduced accounting time by 70% and 99% data entry errors by building a full-stack bookkeeping solution with **Nest.js** and **Next.js** in **TypeScript**, digitalizing manual ledger processes
- Engineered an interactive shareholder dashboard using **React**, **shadcn/ui**, and **Tailwind CSS**, facilitating projects' management across stakeholders, enabling ownership registration and profit distribution tracking
- Developed **OAuth2** and **JWT** authentication via **passport.js**, establishing role-based control for financial data

Software Engineer - Yufeili Medical Commercial Co.,Ltd.

June 2022 – July 2024

Medical Consumables Procurement Platform

Guangdong, China

- Designed and implemented 4 microservices modules (User Info, Merchant, Order Management, After-sales) for medical consumable ordering and sales using **Java**, **Spring Boot** with **RESTful API**, and **MySQL**
- Optimized database performance for frequent queries, increasing QPS from 1,000 to 1,500 by analyzing slow queries with **EXPLAIN** and **composite indexes**, reducing 10% in average search time for daily business
- Implemented hot data caching using **Redis** with **LRU** eviction to store seasonal frequently accessed consumables, reducing load times from 2000 ms to 200 ms in high-traffic periods.
- Designed fault-tolerant order management using **RabbitMQ** with **Topic Exchange** to segregate orders from major and minor suppliers, reducing order failures by 99% in peak time
- Identified pain points in invoice processing workflow and implemented batch invoice title upload/download functionality using **Apache POI**, reducing manual entry time from 5 hours to 30 minutes

Financial System Consultant - HAND Enterprise Solution Co.,Ltd.

July 2018 – Apr 2020

Oracle ERP/EPM System

Shanghai, China

- As team leader, optimized budget planning procedure by **Business Process Reengineering (BPR)** and delivered features by **SCRUM** agile method, reducing budget planning time from 5 months to 3 months
- Led integration of data schema between ERP and legacy systems by implementing **ETL** pipelines using **Python**, achieving 99.9% data consistency for financial statement generation

Projects

Full-stack Project Management System | Bun, Next.js, Hono, Prisma, PostgreSQL

- Implemented **feature-based architecture** with three main features (workspaces, projects, tasks), featuring real-time task tracking, project analytics, and team collaboration capabilities
- Built **RESTful API** for backend using **Hono RPC** with **Zod** validation, ensuring end-to-end type safety
- Designed state management using **@tanstack/react-query** for efficient data fetching, caching, and updates
- Implemented **responsive design Kanban** with optimistic updates and bulk operations for task management

Distributed Document Search System | Apache Zookeeper, HAProxy, Wireshark

- Implemented Leader-Worker distributed system with auto-healing and re-election using **Apache Zookeeper**
- Implemented **Time Frequency-Inverse Document Frequency** algorithm to enhance search accuracy
- Built load balancer by **HAProxy**, improving system's availability by routing TCP and HTTP traffic

Education

Johns Hopkins University | MS in Engineering, Computer Science

Aug 2024 – Dec 2025

Guangdong University of Finance & Economics | BBA in Supply Chain Management

Sept 2014 – June 2018