Steven Zhang

Staff Software Engineer

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Summary

Seasoned Software Engineer with 11 years of experience building robust, large-scale systems for healthcare, financial services, and e-commerce industries. Specialized in designing resilient cloud architectures and integrating AI solutions using Java, Python, and TypeScript to deliver secure, high-performance applications that align technology with strategic business goals.

Skills

Backend: Python, Java, Spring Boot, Node.js, Express.js, NestJS, TypeScript, .NET, PHP, Laravel

Frontend: React.js, React Native, Next.js, Vue.js, Angular, Bootstrap, HTML5, CSS3, SCSS, Tailwind CSS

Database: MySQL, PostgreSQL, Microsoft SQL Server, MongoDB, Amazon DynamoDB, Firebase, Redis

AI & Machine Learning: GPT, DALL·E, Embeddings, Gemini, Vertex AI, TensorFlow, PyTorch, Pandas, NumPy

AI Automation: Zapier, Make, Dialogflow, Apache Airflow

VoIP Technologies: WebRTC: SIP, RTP, Twilio, Asterisk, FreePBX, Kamailio, WebSocket, FreeSWITCH

Cloud & DevOps: AWS, Microsoft Azure, GCP, Vercel, Docker, Kubernetes, Jenkins, CircleCI, GitHub Actions, Terraform

Architecture: Microservices, Microfrontends, Monorepo

Integration: RESTful APIs, GraphQL, Twilio, Stripe, Apache Kafka, RabbitMQ, OAuth 2.0, JWT

Automated Testing: Jest, JUnit, Cypress, Mocha, Supertest, Playwright, Selenium

Additional Technologies & Methodologies: Git, Supabase, Firebase, Agile/Scrum, Webpack, NPM, Yarn, Swagger

Experience

Amazon

Staff Software Engineer | March 2020 – Present, Buda, TX

- Led the backend architecture and development for **Levanta**, an affiliate marketing platform for Amazon sellers, using **TypeScript**, **Node.js (NestJS, Express.js)**, and **Java**, resulting in a **20% increase in partner engagement** and supporting over **50M transactions monthly**.
- Designed and implemented microservices with **TypeScript**, **Java**, and **GraphQL**, reducing API response time by **15%** while maintaining **99.99% system uptime**.
- Integrated **Supabase (PostgreSQL)** and **Firebase** for hybrid SQL and NoSQL storage, optimizing data access patterns for real-time analytics and improving reporting speed by **30%**.
- Deployed high-throughput data streaming pipelines with **Apache Kafka** and **Redis**, boosting eCommerce workflow efficiency by **25%** during peak sales events.
- Automated CI/CD pipelines using **GitHub Actions**, **Docker**, and **AWS ECS**, achieving **zero-downtime deployments** for production releases.
- Integrated **OpenAI API** for AI-driven customer insights, boosting support automation and reducing ticket resolution time by **25%**.

KeyBank
Senior Software Engineer | June 2018- February 2020, Cleveland, OH

- Spearheaded development of AI-automated contract processing workflows using **Python**, **Java**, and **OpenAI API**, increasing document handling throughput by **40**.
- Built PCI-compliant payment systems using **Node.js**, **Java**, and **Stripe**, securely processing over **$20M monthly** in investment transactions.
- Architected microservices with **Python**, **Java**, and **Apache Kafka**, enabling real-time event streaming for financial updates with **sub-second latency**.
- Designed a hybrid data architecture with **MongoDB** (NoSQL) for unstructured contract data and **PostgreSQL** (SQL) for transactions, scaling to **5TB** of secure data with 99.99% data integrity.
- Modernized legacy systems to **AWS** using **Docker**, **Kubernetes**, and **Terraform**, lowering infrastructure costs by **20%** and increasing deployment speed by **50%**.
- Developed reusable microfrontend components in **React**, **Vue.js**, and **TypeScript**, boosting user productivity and delivering **98% customer satisfaction scores**.
- Authored comprehensive operational runbooks, technical documentation, and testing frameworks (Jest, Cypress) to ensure compliance with PCI and HIPAA standards.
- Mentored junior engineers in **Agile/Scrum**, secure coding, and AI workflow integration for next-gen banking solutions.

Dwellfox
Software Engineer | May 2014 - May 2018, Herndon, VA

- Developed automation workflows integrating **AI/ML** with **Python**, **Java**, **TensorFlow**, and **Scikit-learn**, reducing manual effort by **35%**.
- Built scalable web apps using **React**, **Node.js** (Express.js), **Java**, and **GraphQL**, streamlining data integration for automation platforms.
- Designed dynamic dashboards with **D3.js**, **Python**, **Java**, and **Pandas**, reducing reporting time by **25%**.
- Architected microservices with **Docker**, **AWS**, **Java**, and integrated **PostgreSQL (SQL)** and **MongoDB (NoSQL)** to support structured and unstructured business data.
- Delivered AI chatbots using **Dialogflow**, **OpenAI API**, and **Python**, improving customer interaction efficiency by **30%**.
- Automated CI/CD pipelines with **Jenkins**, **GitHub Actions**, and **Java** build processes, ensuring stable releases with no downtime.
- Collaborated to deliver HIPAA-compliant solutions for secure processing of sensitive client information.

Education

Texas Tech University

Bachelor's degree, Computer Science · (2009 - 2013)