

Jason Wang

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PROFILE

I'm a full-stack software engineer who enjoys diving into complex domains, learning new technologies and skills, building scalable distributed systems, and collaborating with teams to solve unstructured problems.

EXPERIENCE

Software Engineer, Co-Creator, Seamless CI/CD Jan 2023 – Present

Seamless (seamless-cicd.com 🌐) is an open-source, low-config CI/CD pipeline for containerized microservices on Fargate.

- Architected a state machine (Step Functions) for orchestrating tasks and running multiple pipelines in parallel.
- Developed seven TypeScript apps with ECS Task Definitions so each pipeline stage can run on Fargate and scale independently; configured Auto-Scaling group metrics, a shared Docker volume on EFS, and IAM policies.
- Engineered a rollback feature so users can minimize downtime by reverting to any tagged image from ECR.
- Built an integration testing feature to validate inter-service functionality using Docker Compose.
- Created a RESTful API with Express.js, allowing users to link microservices to pipelines and set up webhooks for automatic triggers; used Octokit for GitHub interaction and an API Gateway to handle requests.
- Published an npm package 📦 for using Execa to emit logs with customizable payloads; cached logs in Redis.
- Set up notifications (email, Slack, PagerDuty) with SNS and Lambda, to quickly alert users of issues.
- Implemented a relational data model using RDS for PostgreSQL and the Prisma ORM to facilitate migrations.
- Designed and built a React UI for pipeline management, using WebSockets for real-time status and log streaming, Zod for form validation, GitHub OAuth for web app flow, Tailwind CSS, and Figma.
- Authored a case study 📄 on Seamless's problem domain, architecture, challenges, and design decisions.

Software Engineer, Open-Source Projects Dec 2021 – Apr 2023

- JaguarBin: A tool for debugging webhooks (WebSockets, React, PostgreSQL, MongoDB, DigitalOcean Droplet)
- In Season: A seasonal produce tracker (MERN, Jest, Cypress, Docker Compose, EC2, S3, CloudFront)
- Eight Wonders: A round-the-world flight path optimizer (Ruby, Sinatra, PostgreSQL, HTML, CSS, fly.io)

Senior Engineer (Mechanical), Southern California Gas Company Jan 2016 – Nov 2022

- Led a team of 10 engineers and technicians to deliver multiple hydrogen technology demonstration projects.
- Taught staff how to automate data analysis and visualization using Python (Pandas, Jupyter, Plotly), SQL, and Vue.js, reducing errors and saving hundreds of hours on manual engineering calculations.

Engineer II (Mechanical), Southern California Edison Aug 2010 – Jan 2016

- Managed updates for 100+ engineering papers to achieve company energy efficiency goals, earning a promotion.

SKILLS

Languages & Frameworks

JavaScript, TypeScript, Express, React, Jest, Cypress, Zod, Ruby, Sinatra, Python, Go, SQL, HTML, CSS, Tailwind

Other Technologies

Git, GitHub, Node.js, PostgreSQL, Prisma, MongoDB, Redis, RESTful APIs, Docker, Nginx, WebSockets, Figma

Cloud

AWS CDK, SDK, EC2, ECS, EFS, RDS, Step Functions, S3, CloudFront, SNS, DO Droplet, Heroku, fly.io

EDUCATION

M.S. Mechanical Engineering, University of Southern California 2014 – 2017

B.S. Engineering, Harvey Mudd College 2006 – 2010

Professional Engineer License (Mechanical), State of California 2014