

Jason Ng

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PROFILE

I'm a full-stack software engineer with experience in JavaScript, Node.js, Ruby, React, PostgreSQL, as well as Docker and Infrastructure-as-Code deployments using AWS. Most recently, I built Canopy, an open-source real-time monitoring framework designed for CDNs.

EXPERIENCE

Software Engineer, Co-Creator, Canopy, (canopy-framework.github.io) 📄 04/2023 – present

Canopy is an open-source, real-time monitoring framework designed for CDNs.

- Architected and built an end-to-end pipeline for streaming Amazon CloudFront CDN logs to a ClickHouse database and visualizing metrics on real-time dashboards in Grafana
- Reduced buffering latency to a customizable amount (as low as 0 seconds) by engineering a custom solution for delivering real-time streaming data using AWS Lambda
- Implemented a buffer for re-streaming and retrying failed logs using AWS Lambda and Kinesis Data Streams, and a dead-letter queue using AWS SQS for routing failed logs to persistent storage
- Containerized and configured Canopy's backend infrastructure, including Vector, ClickHouse and Grafana for deployment on a single Docker network
- Implemented native support for monitoring parallel CloudFront distributions by automating their attachment and detachment to and from the pipeline, while tracking their meta-data with SQLite
- Automated 50+ AWS steps down to a single deploy command, by writing CDK code to deploy two CloudFormation stacks
- Created a CLI to facilitate configuration, deployment, and teardown of the pipeline
- Constructed a full-stack Admin Dashboard for monitoring pipeline status and configuring alerts with an Express backend, SQLite database and a TypeScript-based React frontend
- Set up email notifications to minimize incident response time
- Collaborated remotely with a team of four software engineers across multiple time zones
- Authored a technical case study on Canopy's problem domain, architecture, challenges and design decisions (canopy-framework.github.io 📄)

Software Engineer, Self-Employed 11/2022 – 04/2023

Developed personal and open-source software, some highlighted projects include:

- Request Warehouse: a real-time tool for debugging and testing webhooks (Node.js, Express, React, Material UI, MongoDB, PostgreSQL, Webhooks, DigitalOcean Droplet, NGINX)
- Done & Done: an interactive to-do list manager (Ruby, Sinatra, PostgreSQL, HTML, CSS)

Futures Trader, Self-Employed 2011 – 2022

- Executed split-second decisions for trading index futures, based on technical analysis of volatility chart patterns, order flow, momentum of price movement and market conditions.

SKILLS

Languages & Frameworks

JavaScript, TypeScript, React, Express, Jest, Ruby, Sinatra, SQL, HTML, CSS

Cloud

AWS: CDK, SDK, EC2, ECS, Fargate, IAM, Lambda, CloudFormation, S3, SQS; Digital Ocean Droplets; Heroku

Other Technologies

Docker, Git, GitHub, Node.js, PostgreSQL, MongoDB, SQLite, Unit Testing, RESTful APIs, Bash, Webhooks, NGINX

EDUCATION

Launch School, Software Engineering & Full-Stack Development 11/2022 – 04/2023

Multi-year full-stack software engineering curriculum with mastery-based learning

Baruch College, B.B.A. Accountancy