

Jay Jayabose

Software Engineer

✉ jayabose@gmail.com 📍 Brooklyn, NY 🖱 jayabose.me 🌐 jayjayabose in jayabose

Profile

I'm a full-stack software engineer with extensive experience in both JavaScript and Ruby, and I'm also proficient in TypeScript and Go. I have collaborated with product teams in several early-stage companies. Most recently, I created Arbiter, a solution that seamlessly incorporates video conferencing into an application in a matter of minutes.

Professional Experience

Co-Creator, Software Engineer

2023 – present | Remote

Arbiter (arbiter-framework.com [🔗](#))

- Created an open-source, serverless real-time conferencing framework that automates deployment to AWS and enables developers to integrate room-based video conferencing into their applications in minutes
- Designed and built a video conferencing server (Selective Forwarding Unit) that distributes media streams, and manages call state for 15+ users in a single room
- Wrote a signaling server and signaling scheme to establish WebRTC connections and synchronize call state among participants (WebSocket API Gateway, Lambdas, DynamoDB)
- Containerized server components and designed a scaling mechanism that reduces complexity of server deployment by 10+ steps and enables API-based scaling (Docker, ECS, Fargate)
- Wrote a RESTful API to manage backend interactions between the frontend application and AWS infrastructure that provisions new ECS container instances to meet user demand (React, HTTP API Gateway, ECS, Lambdas, DynamoDB)
- Developed a CLI that automates the provisioning of AWS cloud infrastructure (ECS Clusters, WebSocket Gateway, HTTP API Gateway, IAM roles, etc.), reducing a 50+ step workflow to a single command
- Decoupled services based on traffic patterns and resolved race and concurrency challenges associated with event-driven architecture
- Implemented a pair-programming framework for a remote team of 3 engineers to foster mentorship and collaboration, resulting in increased team-wide ownership of code and clarity on technical decisions
- Authored a comprehensive technical case study providing analysis of Arbiter's problem domain, system design, and engineering decisions (arbiter-framework.com/case-study [🔗](#))

Software Engineer, Self-employed

2022 – 2023 | Remote

Selected Projects

- DreamCatcher - Tool for collecting and debugging webhooks built with React, Express, MongoDB, PostgreSQL and deployed to Digital Ocean Droplet
- Donzo - Todo list application created using Express, Handlebars, and PostgreSQL; implemented unit tests with Jest

Commercial operator, Multiple venture-backed companies

New York, NY

- Set OKRs and managed a 15-person team responsible for all advertiser spend and ROI on the company's advertising platform.
- Partnered with product team to develop new advertiser products, prioritize backlog, and innovate media auctions.
- Worked with product and engineering to pivot a 20-person company to a real-time-bidding display advertising business achieving a \$5MM run rate in 12 months.
- Managed development of custom direct-response marketing applications for Fortune 500 e-commerce companies

Skills

Languages & Frameworks

JavaScript, TypeScript, Go, Ruby, React/Redux, Node, Express, Sinatra, MongoDB, PostgreSQL, RESTful APIs, HTML, CSS, jQuery, Jest

AWS Cloud

DynamoDB, Lambda, EC2, ECS, HTTP/WebSocket API Gateways, S3, Cloudfront, Cloudformation, IAM, Fargate

Other Technologies

Docker, Git/Github, Nginx, Postman, DigitalOcean Droplets, Bash, Linux, WebSockets, WebRTC

Education

M.B.A., Georgetown University

Washington, DC,

