Chris Shen

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I am a full-stack software developer with multiple years of experience working with JavaScript, Ruby, Go and AWS services.

Experience

Co-Creator, Software Developer, *Otter* (*otter-framework.dev*) ↗   Jan 2023 – present

Created Otter, an open-source, cloud native framework for peer-to-peer video communication within web applications.

- Designed a *serverless* architecture on AWS that prioritizes low maintenance and scalability
- Implemented a *Signaling* server with three *Lambdas* written in TypeScript for peer connectivity and messaging; configured the *WebSocket API Gateway* for long-lived connection, *DynamoDB* for persisting state
- Containerized *CoTURN*, an open-source implementation for NAT traversal on *Fargate*; configured *Task Definitions, Network Load Balancer,* and *Auto-Scaling group* for horizontal scaling
- Developed and published an npm package using TypeScript and *oclif* that streamlines the deployment and teardown of infrastructure components; used *AWS SDK* and *CloudFormation* to provision infrastructure resources
- Architected a scalable API server with one *Lambda* per endpoint for integrating Otter into existing applications; used *HTTP API Gateway* to handle requests, and *DynamoDB* to persist session state
- Secured API Gateways with API Key authentication & *JSON Web Tokens*
- Crafted a *React* web application that uses *WebSocket* and *WebRTC* API to enable real-time video communication, messaging and file-sharing between peers; polished with Tailwind CSS; hosted using *CloudFront* with *S3*
- Authored a comprehensive case study ↗ on Otter's design decisions and engineering challenges

Product Manager, *Baidu Inc.*   Apr 2015 – Oct 2018 | Beijing, China

Collaborated with a team of six developers in an Agile environment with an average sprint length of four weeks. Delivered two internal web applications aiming for boosting sales team's performance and efficiency. Key features include:

- A dashboard providing customer and market insight for SME sales
- Personalized, more detailed customer data report for KA sales upon request
- A product recommendation service based on customer interactive metrics

Projects

Open-Source projects, *Developed during Launch School*   2021 – 2023
- ReAck: a real-time webhook inspector with custom endpoints. (React, Express, WebSocket, PostgresSQL, MongoDB)
- NoSpoil: a household inventory management application (Ruby, Sinatra, PostgresSQL, and Bootstrap)
- Later: a minimal todo app (Ruby, Sinatra, HTML/CSS)

Skills

Languages	Frameworks & Libraries	Cloud	Other
JavaScript, TypeScript, Ruby, Go, SQL, HTML/CSS	React/Redux, Tailwind, Bootstrap, Express, Sinatra, Jest, oclif	AWS SDK, CloudFormation, Lambda, EC2, ECS, Fargate, API Gateways, CloudFront, S3, DynamoDB, DO Droplets	Node.js, Git/Github, AWS SAM, Docker, PostgreSQL, MongoDB, WebRTC + API, RESTful APIs, Nginx

Education

Full-Stack Web Development, *Launch School*   Oct 2021 – Apr 2023

Master of Business Administration, *Renmin University of China*   2015 – 2018

BA Medical Sciences, *Peking University*   2006 – 2011