

Michael Johnson

Software Engineer

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PROFILE

I'm a full stack engineer with extensive experience in Typescript, Go, Javascript and Ruby.

PROFESSIONAL EXPERIENCE

Co-Creator, Software Engineer -- Umbra

2023 – present

San Francisco / Portland

Umbra (umbra-collab.net) is an open-source, browser-based code editor enabling real-time collaboration and code execution.

- Designed and engineered the Umbra backend as a scalable, service-oriented architecture, including five discrete services utilizing various hosting solutions to allow for ease of scalability ([Node.js](#), [Express.js](#), [AWS EC2](#), ([Cloudflare Workers](#), [Durable Objects](#), [R2](#)))
- Designed and built the Umbra frontend ([TypeScript](#), [React](#))
- Implemented real-time, multiplayer code-editing ([Yjs](#), [WebSockets](#), [CRDT](#))
- Implemented persistence of user 'code snippets' ([PostgreSQL](#), [AWS RDS](#), [AWS IAM](#)) and user account authentication/authorization ([AWS Cognito](#))
- Automated the deployment process ([GitHub Actions](#), [Docker](#))
- Designed and implemented a RESTful API for Umbra, supporting user authentication, code snippet management, and real-time code execution.
- Authored an in-depth case study, analyzing Umbra's problem domain, system design, and engineering decisions.
- Collaborated with a remote team of four engineers across three time zones, employing agile methodologies and practices such as daily standups, pair programming, and code reviews.

Software Engineer -- Self-employed

2021 – 2023

San Francisco

Developed open-source applications including:

- ReqBucket - Tool for collecting and debugging webhooks (DO Droplet, Nginx, MongoDB, Node.js, Express, React).
- GoChat - Open-source internet chatroom toolkit (Golang, React)
- Other projects can be found on my GitHub: github.com/elsif-maj

Sales Manager (Certified Arborist) -- Davey Tree Expert Co.

2021 – 2022

San Francisco

Team Leader -- Davey Tree Expert Co.

2017 – 2021

Portland

SKILLS

Backend (*Node.js, Express, Ruby, Go, PostgreSQL, MongoDB, REST APIs*),

Frontend (*JavaScript, TypeScript, React/Redux, Handlebars, HTML/CSS*),

Cloud (*Digital Ocean, AWS (EC2, IAM, Lightsail, Cognito, RDS), Cloudflare (Workers, Durable Objects, R2)*),

Other (*Git/GitHub, Docker, Linux, Bash, HTTP, WebSockets, Jest, OOP, Nginx, Postman*)

EDUCATION

Launch School

2021 – 2023

Multi-year, mastery-based software engineering tradeschool.

Georgia State University -- Master of Arts (ABT), Philosophy

2010 – 2012

University of Colorado, Boulder -- Graduate Coursework, Linguistics

2011