

# Josh Lakenan Software Engineer

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## PROFILE

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I'm a software engineer who takes pride in solving challenging problems with positivity, creativity, and consistency. Recently I built Pinniped, an open source Backend as a Service (BaaS) for fast moving Node.js engineers. I've previously worked as a software developer at General Motors and in various operations leadership roles. Both my technical and non-technical skills, such as juggling and cultivating bonsai trees, illustrate my love for learning new things.

## TECHNICAL EXPERIENCE

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**Software Engineer & Co-Creator**, Pinniped - pinniped-baas.dev [🔗](#) 2024 – present

An open-source BaaS solution that creates and deploys customizable backends, built for engineers who need portability and a familiar way to build custom application logic with native Node.js rather than serverless functions.

- Created an auto-generating API layer to support REST operations on a dynamic set of user generated database tables.
- Implemented a schema management system with table metadata storage, migrations, and custom models to ensure schema consistency between development and production environments.
- Built middleware, leveraging the schema management system, to enable customizable access control and data validation for unique, user generated tables.
- Architected an event driven, extensibility framework that enables engineers to build custom application logic with native Node.js, avoiding the pain points of serverless functions.
- Developed a deployment pipeline CLI tool to create, manage, and deploy Pinniped applications to AWS EC2, using AWS SDK v3.
- Secured deployed applications by automatically fetching and monitoring SSL certificates to set up an HTTPS connection in any deployment environment.
- Crafted an admin user interface to provide user-friendly table schema management, database backups, and HTTP Request monitoring.
- Designed, built, and deployed a JavaScript SDK to facilitate intuitive frontend interactions with the Pinniped backend API.
- Evaluated system architecture tradeoffs and developed a system design to meet the requirements of a unique use case. [🔗](#)

**Software Engineer**, Self Employed 2022 – 2023

Developed freelance and open-source applications including:

- Presto-Requesto - Tool for collecting and debugging webhooks built with a MERN stack + Postgres, deployed to a DO Droplet.
- E-Com COGS - Tool for calculating monthly cost of goods sold for E-Commerce businesses.

**Software Developer**, General Motors 2015 – 2016

Worked as a member of GM's Computer Aided Engineering (CAE) organization on the High Performance Compute (HPC) team.

- Designed and executed software test plans supporting the processing needs of 20+ internal engineering models used by vehicle design engineers.
- Coordinated global user acceptance testing of High Performance Compute infrastructure upgrades.

## OTHER EXPERIENCE

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**Operations Leadership**, Skyzone / Travelization 2016 – 2022

- Led large, diverse teams to meet and exceed revenue and customer retention goals delivering 14M+ in yearly revenue.
- Created operational systems and training materials used to ensure operational security and efficiency.

## SKILLS

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### Back End

JavaScript, TypeScript, Node.js, Express, REST APIs, Go/Golang, SQL, SQLite, PostgreSQL, MongoDB

### Front End

JavaScript (ES6+), Typescript, React, HTML/CSS, jQuery, handlebars

### Cloud

AWS EC2, Digital Ocean Droplet, Serverless computing

### Other

Git, Github, Linux, Bash, HTTP, Jest, Nginx, Object Oriented Programming (OOP), Jest

## EDUCATION

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**Bachelor of Science (BS), Information Systems**, Brigham Young University

2012 – 2015