William Yennie

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EXPERIENCE

Software Engineer; Co-creator, *Firefly* ⧉   2022 – 2023

Firefly is an open-source observability framework, providing an overview of serverless function health through the use of metrics and traces.

- Prototyped and built Firefly using Node.js, OpenTelemetry and Amazon Web Services (Lambda, Metric Stream, Firehose, S3, IAM).
- Created a CLI to automatically instrument Lambda functions and set up AWS infrastructure to emit metrics from CloudWatch and published as an NPM package.
- Automated AWS infrastructure setup and teardown through the use of the AWS SDK and Terraform.
- Wrote middleware to handle context propagation in traces for asynchronous, event-based Lambda invocations.
- Built a custom OpenTelemetry collector to receive metric and trace data.
- Architected telemetry pipeline which utilized OpenTelemetry, Promscale (timeseries database), and Grafana.
- Reduced telemetry pipeline set up down to 2 steps using Docker (images, network, docker-compose).
- Designed Grafana dashboards to display serverless function telemetry data using SQL queries.
- Collaborated with a remote team of 4 engineers across 3 countries using agile workflow.
- Authored technical case study on Firefly's development and use case (read the case study here ⧉).

Software Engineer, *Self Employed*   2021 – 2023

Created open-source applications using various technologies:
- HookScope: A database-backed web application for inspecting and debugging webhooks. Built with Node.js, Express, Handlebars, Ngrok, PostgreSQL.
- FlightWise: Web application for tracking and visualizing flight paths from specific airlines and airports. Built with React, Node.js, Express, MongoDB.
- TaskVault: A task tracking web app with a RESTful API. Built with Ruby, Sinatra, ERB, PostgreSQL.
- ShopSense: An e-commerce shopping cart application. Built with React, Express, Node.js and MongoDB.

SKILLS

Languages & Web Dev
Python, JavaScript, Ruby, Go, HTML/CSS, React, Express, Flask, Rails, Django

Cloud & Infrastructure
AWS (Lambda, SQS, SDK, S3), Digital Ocean, Docker, Linux, Nginx, Kubernetes

Database & DevOps
PostgreSQL, MongoDB, TimescaleDB, Redis, Terraform, GitHub Actions

EDUCATION

Launch School, *Full Stack Web Development*

Multi year mastery based curriculum focused on fundamentals of programming.
Core Curriculum: OOP, Data Structures, Flow Control, REST, Network, Database
Capstone: Advanced Algorithms & Data Structures, System Design, just-in-time learning