

Jason Aricheta

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</> Technical Experience

Co-Creator, Software Engineer, Constellation

Aug 2022 – Dec 2022

Constellation is an open-source tool that makes scalable geo-distributed API load testing accessible to developers.

- Architected a serverless load-generation framework that can simulate, record, store and visualize metrics of up to 10,000 scripted virtual users.
- Developed a system for streamlined deployment of cloud infrastructure heavily dependent on user input by integrating business logic to AWS Cloud Development Kit (CDK).
- Implemented a parallelized deployment strategy for multi-regional cloud infrastructure to minimize deployment time via leveraging Nodejs multi-threading against AWS CDK
- Developed a comprehensive command line interface to provide real-time status updates on multi-regional deployment by promisification of Nodejs child processes within a CLI framework (Commander.js)
- Crafted a consensus mechanism to synchronize load generation from geographically distributed cloud components.
- Developed an event-driven teardown mechanism to minimize the uptime cost of serverless components.
- Wrote and containerized components to support load generation and monitoring including:
 - a load generation application that can make and monitor HTTP requests following a user-defined test script.
 - a data collection system per region that provides a single stream of data to a central AWS Timestream database.
 - a visualizer that aggregates metrics stored in the database.
- Collaborated with an team of engineers from US & Canada, including daily standups and pair programming.
- Authored Constellation's comprehensive technical white paper (<https://constellation-load-testing.github.io/case-study.html>) and produced all front-end assets and animations for Constellation's website and tech talk

Software Engineer, Open-source projects

Dec 2021 – Aug 2022

- **Keep Tabs:** a todo app complete with filter/search, authentication and session persistence (TypeScript, MUI, React, Redux Toolkit, JWTs, Node.js/Express, MongoDB)
- **Cascade Free Voting:** a voting app focused on removing information cascade (JavaScript, React, Node, SQLite3)
- **Bin of Requests:** a tool to debug webhooks (JavaScript, React, MUI, Node.js/Express, MongoDB and PostgreSQL)

📁 Professional Experience

Civil Engineer, AECOM

Jan 2019 – Dec 2021

- Provided earth stabilizing structural solutions from project proposal, costing, design and construction monitoring.
- Wrote calculation packages & scripts in Python to automate data processing and save costs on projects.
- Mentored several junior engineers, facilitating their learning in project and construction oversight and application of best practices in technical engineering design.

🧠 Skills

Languages & Frameworks

Python, JavaScript, TypeScript, Node.js, Express, React, Redux (and Redux Toolkit), HTML/CSS

Technologies

PostgreSQL, SQLite3, MongoDB, Docker, Nginx, Git/Github, HTTP/REST, NPM

Cloud

AWS (Lambda, ECS, Fargate, DynamoDB, Timestream), AWS CDK, Digital Ocean Droplet, Heroku

🎓 Education

Software Engineering, Launch School (Capstone)

2021 – 2022

Multi-year full-stack software engineering curriculum emphasizing mastery of fundamentals

Web Development Apprenticeship, Dev Academy

2022

15 Week Bootcamp focused on 3-tier stack with React, Redux, JS, HTML, CSS and Nodejs

BE (HONS) Civil Engineering, University of Auckland

2014 – 2019

Specialized in Structural & Geotechnical Engineering. *First Class Honours*