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 by leveraging Node.js child processes against AWS CDK.
- Developed a comprehensive command line interface to provide real-time status updates on multi-regional deployment by promisification of 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 cost of uptime for 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 a team of engineers from the US & Canada, involving 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, and design to 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	Technologies	Cloud
Python, JavaScript, TypeScript, Nodej.js, Express, React, Redux (and Redux Toolkit), HTML/CSS	PostgreSQL, SQLite3, MongoDB, Docker, Nginx, Git/Github, HTTP/REST, NPM	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*