Andrew Thresher *Software Engineer*

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Profile

I am a software engineer transitioning from an aerospace engineering career with over five years of designing solutions in the aerospace industry. Over the last two years, I've worked with multiple languages to develop several projects. Most recently, I built the load testing service Constellation ☐ .

Technical Projects

Constellation, *Co-Creator, Software Engineer* ☐   2022

Created an open-source framework that simplifies geographically distributed API load testing

- Architected a serverless load-generation system that simulates users and records their actions from many AWS regions simultaneously.
- Automated and streamlined the deployment of cloud infrastructure based on user input, reducing dozens of complex AWS actions to two Constellation commands.
- Developed a command line interface that provides real-time status for multi-regional deployment.
- Wrote and containerized components that support load generation and monitoring including:
  - a load generation application that makes and monitors HTTP requests following a user-defined test script
  - a data collection system that provides a single stream of data to a central AWS Timestream database
  - a data visualization tool that provides detailed visibility for convenient performance analysis of test results
- Authored the Constellation case study: https://constellation-load-testing.github.io/case-study.html ☐
- Collaborated remotely with an international team of four engineers across four timezones

Other Projects   2021 – 2022

- BinOfRequests: A full-stack application to monitor HTTP requests primarily intended for debugging webhooks (Express, MongoDB, PostgreSQL, React, Nginx, PM2, AWS EC2)
- Shopping Cart: A database-backed e-commerce app (Express, React, MongoDB, Docker)

Skills

Languages & Frameworks	Technologies	Cloud
Ruby, Sinatra, JavaScript, TypeScript, Node.js, Express, React/Redux, Go, HTML/CSS	PostgreSQL, MongoDB, Docker, Nginx, Git/GitHub, HTTP/REST, NPM	AWS (EC2, ECS, Lambda, DynamoDB, Timestream, IAM), Digital Ocean Droplet, Heroku

Professional Experience

Design Engineer II, *Systima Technologies*   2015 – 2021 │ Kirkland, WA

- Proposed, designed, and tested novel hot gas, cold gas, and solid propellant actuated devices including ejectors, two-stage retention and deployment mechanisms, and launch systems.
- Performed flight and ground test events, both on- and off-site, for a variety of systems.
- Presented proposals and project updates to government and private customers.

Education

B.S. Aerospace Engineering, *Embry-Riddle Aeronautical University*   2009 – 2014 │ Daytona Beach, FL
Honors Program, Sigma Gamma Tau, Silver Wings