Raul de Hevia *Software Engineer*

www.rauldehevia.com https://github.com/RdeHevia ✉ raul.dehevia@gmail.com San Francisco, CA

PROFESSIONAL EXPERIENCE

Co-Creator, Software Engineer 2021 | San Francisco, CA

Monsoon (monsoon-load-testing.github.io)

Monsoon is an open-source, serverless framework for running browser-based load tests in the cloud.

- Architected and constructed an auto-scaling, fully serverless load-generation engine using AWS ECS, Fargate, EventBridge and Lambda to spin up and control up to 20,000 Google Chrome instances, one per virtual user.
- Led the design and implementation of an auto-scaling ETL pipeline using AWS ECS, Lambda and S3 that can process dozens of Gigabytes of raw test results per hour before storing them in AWS Timestream (time-series database).
- Built the orchestration engine of the ETL pipeline with AWS EventBridge and Lambda to decouple the load-generation from the transformation process and to enable raw test data to be processed in near real-time.
- Wrote a npm library (monsoon-weather-station) in Typescript to abstract away the complexity of writing the load-testing scripts as well as to automate the extraction of relevant performance metrics from Chrome instances using the npm library Puppeteer and the Performance Web API.
- Built a CLI application using AWS CDK and SDK libraries to automate the deployment of Monsoon's infrastructure and to allow users to create, configure and launch their tests.
- Developed Monsoon's visualization dashboard, Weather Channel, to allow Monsoon's users greater insight into the performance of their web app in near real-time using React, VictoryChart and Express.
- Applied Agile principles to manage activities, set deadlines and identify roadblocks for a remote team of 4 engineers.
- Authored comprehensive technical case study, readable at monsoon-load-testing.github.io/case-study

Full-stack Developer 2020 – 2021 | San Francisco, CA

Self-Employed

- RequestChest: A Request Bin-style application to collect and inspect HTTP and webhook requests. Built with Node.js, an Express RESTful API, React, React Router and MongoDB and deployed to a DO Droplet via SSH.
- Cello: Project management app using an Express RESTful API, React, Redux and MongoDB.
- Flight routes dashboard: Full stack web app for viewing the available routes between two airports built with Express, React, Redux, containerized with Docker and deployed in AWS with Elastic Beanstalk.

Structural Engineer 2014 – 2020

Arup San Francisco (CA), UK, Spain

- Worked in a wide array of international projects, regularly interfacing with other engineering teams, clients and public agencies.
- Created tools and workflows in VB to process raw data from structural models and obtain different insights.

TECHNOLOGIES

Languages

JavaScript, Typescript, Go, SQL, HTML, CSS

Frameworks

Express, React, Redux, TailwindCSS

Misc. Technologies and Skills

Node.js, PostgreSQL, MongoDB, Docker, Puppeteer, Jest, Git, Github, Postman, HTTP, OOP, RESTful API, ETL pipelines, Distributed Systems, Numerical and Statistical Methods

AWS

Lambda, ECS, Fargate, S3, Timestream, EventBridge, VPC, CloudWatch, CloudFormation, IAM, SDK, CDK

EDUCATION

Software Engineering & Full-stack Web Development 2020 – 2021

Launch School

BS and MS in Civil Engineering 2008 – 2015 | Spain

Technical University Of Madrid

Exchange student in Delft University of Technology, Netherlands (2012)