Raul de Hevia *Software Engineer*

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PROFESSIONAL EXPERIENCE

Software Engineer   02/2022 – present | San Francisco, CA
Intuitive Surgical, Iris Team ✎

- Improved the user experience of the core application by redesigning all the workflows of a TypeScript data-broker service that retrieves and processes DICOM files. Retrieval time was reduced by 80% (from minutes to seconds).
- Centralized the management of all the migrations and DDL operations of services with an ephemeral containerized HTTP-server application written in TypeScript.
- Streamlined the creation of m2m SSH connections between VM applications and a central service by building an event-driven pipeline that delivers the keys to the central service using AWS S3, SQS, CloudFormation and Go SDK.
- Architected and built the Observability solution for a core service using the Elastic Stack (ElasticSearch, Kibana, Fleet, Elastic Agent), Docker, AWS EC2, SNS, Go and Bash.
- Automated the configuration and enrollment of the monitoring agents of the Observability backend with a middleman HTTP service written in Go.

Co-Creator, Software Engineer   2021 – 02/2022 | 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 Lambda, S3, EventBridge and Timestream that can process dozens of Gigabytes of raw test results per hour.
- Wrote npm library so users can script their tests, using Typescript, Puppeteer and the Performance Web API.
- Developed a visualization dashboard using React and VictoryChart. Results can be visualized in near-real time.

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

- Worked in multiple full-stack projects using Node.js, Express, React, Redux, PostgreQL and MongoDB

Structural Engineer   2014 – 2020
Arup   San Francisco (CA), UK, Spain
- Worked in a wide array of international projects, regularly interfacing with other teams, clients and public agencies.

TECHNOLOGIES

Languages (*Typescript, JavaScript, Go, Bash, SQL, HTML, CSS*)

Cloud & Dev Tools (*AWS, Docker, Git, GitHub, CircleCI, Jenkins, Puppeteer, Jest, Postman, Nginx*)

Misc. Technologies & Skills (*Node.js, Express, Knex.js, PostgreSQL, MongoDB, Redis, Elastic - ELK Stack, HTTP, WebSocket, SSH, TLS, DICOM, Orthanc, Distributed Systems, ETL pipelines, React, Redux, Vue, TailwindCSS*)

EDUCATION

AWS Solutions Architect   2023
Associate ✎

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*)