

Raul de Hevia *Software Engineer*

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PROFESSIONAL EXPERIENCE

Software Engineer

02/2022 – present | San Francisco, CA

Intuitive Surgical, Iris Team (backend) 🌐

- Dramatically improved core application's user experience by redesigning all the workflows of a TypeScript backend service that retrieves and processes DICOM files. Retrieval time was reduced by 80% (from minutes to seconds).
- Simplified the management of the DB schemas across various services by creating a containerized HTTP-server application written in TypeScript that serves as a centralized platform for all the migrations and DDL operations.
- 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.
- Improved the visibility of a core service by architecting and building a customized Observability platform using the Elastic Stack (ElasticSearch, Kibana, Fleet, Elastic Agent), Docker, Go, Bash, AWS EC2 and SNS.
- Automated the configuration and enrollment of the monitoring agents with the Observability solution by creating 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 in near real-time.
- Wrote npm library so users can script their tests, using Typescript, Puppeteer and the Performance Web API.
- Developed Monsoon's visualization dashboard, Weather Channel, using React, VictoryChart and Express.

Full-stack Developer

2020 – 2021 | San Francisco, CA

Self-Employed

- Worked in multiple full-stack projects using Node.js, Express, React, Redux, PostgreSQL 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)