Samuel Perales

Fullstack Software Engineer

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EXPERIENCE

CHARTERUP   FULLSTACK SOFTWARE ENGINEER
June 2022 – Present | The University of Texas at Austin

- → Develop and improve features using TypeScript, HTML, CSS, and Vue across four of the companies web based services for booking and managing transportation reservations across North America.
- → Extend the companies microservices with Java, Spring, Hibernate, and SQL.
- → Contribute to both frontend design decisions and API changes for new features.
- → Develop the company's Disaster Recovery plan by building out a Multi-Region Failover setup in AWS through Terraform.
- → Create an official engineering onboarding process for more effective integration of developers into the team.

TEXAS EXPERIMENTAL GEOMETRY LAB   RESEARCHER
January 2020 – Present | The University of Texas at Austin

- → Led a team of four undergraduates to develop novel algorithms for computational proofs in geometrics group theory and optimized them to run in real time.
- → Designed and documented interactive web applications for the research site.

COMPUTATIONAL ECOLOGY LAB   RESEARCHER
June 2021 – March 2022 | Arizona State University

- → Designed and optimized stochastic models for predicting social insect behavior.
- → Developed an interactive Python GUI for researchers to collect data.
- → Analyzed high volumes of spatio-temporal data to extract meaningful conclusions in an ecological context.

COMPUTATIONAL IMAGING LAB   RESEARCHER
June 2020 – August 2020 | Harvey Mudd College

- → Worked with a partner to design, code, construct, and test a working 3D printed microscope and contributed to the UC2 optical open-standard.
- → Implemented Fourier Ptychographic Microscopy and EPRY-FPM in Python for combining low-resolution input images into a super-resolution output image.

PROJECTS

LAYOLAY   REACT + FIREBASE

- → Cofounded 3D printing ecommerce startup built with React and Firebase, styled with Tailwind and daisyUI, and deployed to Netlify.
- → Collaborated with a partner over several months to develop major customer-facing features and a scalable backend for high order volumes.
- → Implemented user authentication, PayPal payment processing, realtime chat, Three.js object visualizations, and full profile creation pathway.

JSON2YAML   HTML + CSS + JS
2022

- → Built a web application for converting between JSON and YAML data formats.
- → Implemented CodeMirror to enable syntax highlighting and live code translation.

SKILLS

LANGUAGES

Python • JavaScript • TypeScript • HTML • CSS • Java • Swift • R • MATLAB

WEB DEVELOPMENT

React • Firebase • Vue • Tailwind • Spring Boot • REST • Google Analytics • Terraform • MySQL • AWS

OTHER

Git • Jupyter • Numpy • Pandas • LaTeX • Adobe Illustrator • Gimp • Agile / Scrum

EDUCATION

THE UNIVERSITY OF TEXAS AT AUSTIN

BACHELORS IN MATHEMATICS
CERTIFICATE IN COMPUTER SCIENCE
Aug 2018 - May 2022 | Austin, Texas
GPA: 3.75 / 4.0

CERTIFICATIONS

- AWS Cloud Practitioner
- AWS Solutions Architect

ACTIVITIES

- Math Club (Vice President)
- Sunday Morning Math Group
- Research Training Grant
- Freshman Research Initiative
- Directed Reading Program
- Math, CS, and Physics Tutor

ACADEMIC BLOG

CAPSNCRUNCH.GITHUB.IO

I make frequent posts about my academic work and personal projects.