Richard Bustamante

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SKILLS

Programming languages: Python, Java, JavaScript, C/C++, Rust

Cloud & DevOps*:* AWS, Kubernetes, Docker, Helm, Terraform

Certifications*:* HashiCorp Certified Terraform Associate (003)

PROFESSIONAL EXPERIENCE

SciTec Inc, Princeton, NJ **Feb 2020-Present**

Staff Software Engineer/ Scientist

- Architected reusable Helm charts deployed as shared dependencies across multiple projects, standardizing Kubernetes deployments and driving an 80-90% increase in service production
- Architected cloud infrastructure using Infrastructure as Code (IaC) with Terraform to ensure repeatability, environment parity, and rapid provisioning across environments reducing environment provisioning time by 60-80%
- Built and maintained end-to-end CI/CD pipelines using GitLab CI/CD to enable automated build, test, and deployment workflows for containerized microservices increasing deployment frequency by 3x
- Designed, deployed, and operated highly available, secure, and scalable AWS EKS clusters, leveraging best practices in IAM, VPC networking, autoscaling node groups, and fault tolerance improving cluster availability to 99.9%
- Designed and implemented full stack web applications using Python for backend services and ReactJS for modern, responsive, user interfaces increasing frontend responsiveness by 30%

PROJECTS & TECHNICAL EXPERIENCE

StackOverflow Social Learning Network

- Designed and implemented predictors for analyzing interactions between users on social learning networks, such as time to answer, probability of specific answering-asking user pairs, and response upvotes
- Created social graph of user network on Stack Overflow, based on interactions parsed from JSON file
- Improved prediction performance by 21.9 - 23.0% as compared with baselines (sparse factor analysis, matrix factorization and Poisson regression)

Autonomous Car with Android-Based Control

- Designed and implemented an end-to-end hardware and software communication system enabling remote control and monitoring via a mobile application
- Developed an Android application integrated with SQLite backend, utilizing TCP socket-based communication and evaluating obstacle-avoidance algorithms for autonomous behavior
- Implemented multiprocessing on a Raspberry Pi, leveraging interrupt driven input to reliably process real time instructions transmitted from the mobile application

PUBLICATIONS

P. Hansen, **R.Bustamante**, et al. “Predicting the Timing and Quality of Responses in Online Discussion Forums”,

IEEE International Conference on Distributed Computing Systems (ICDCS), 2019.

EDUCATION

The College of New Jersey, Ewing NJ **2015-2019**

Bachelor of Science, Computer Engineering