

Ricardo Piro-Rael

SENIOR BACKEND ENGINEER · DISTRIBUTED SYSTEMS ARCHITECT

405 Davis Court #601 San Francisco, CA 94111

■ +1 505 200 1555 | ■ fdisk@fdisk.co | ■ www.fdisk.co | ■ rickpr | ■ rickpr

Skills

Languages	Python (Expert), SQL, Ruby, Scala, Swift
Data & Storage	PostgreSQL (Internals, Tuning), Redis, Firestore, CoreData
Infrastructure	Google Cloud Platform (GCP), Docker, Cloud Run, Celery, ROS
Concepts	Distributed Systems, Asynchronous Event Loops, Hardware Integration

Work Experience

GainTain, Inc.

San Francisco, CA

CTO & COFOUNDER

May 2025 - Present

- Architected a hybrid data model using **PostgreSQL** for strict transactional integrity and **Firebase** for low-latency, real-time client synchronization.
- Built a highly concurrent backend using **FastAPI** and **Google Cloud Platform (GCP)**, designing for idempotency and horizontal scalability from Day 1.

The June Care Company

Remote

HEAD OF ENGINEERING (MAY 2025) · SENIOR SOFTWARE ENGINEER (JAN. 2024)

Jan. 2023 - May 2025

- Executed a “lift and shift” infrastructure migration from AWS to GCP, ensuring zero downtime for legacy systems.
- Modernized a legacy Rails monolith on GCP Compute Engine, implementing aggressive cost-optimization strategies that significantly reduced monthly cloud spend.
- Led the engineering team through a period of resource constraints, prioritizing stability and performance improvements.

Carta

San Francisco, CA

SENIOR SOFTWARE ENGINEER

Oct. 2022 - Jan. 2023

- Engineered high-precision financial reporting pipelines using **Python** and **Scala**, ensuring strict data accuracy for equity management.

Iron Ox

San Carlos, CA

SENIOR BACKEND ENGINEER

Jan. 2022 - Oct. 2022

- Developed control software for autonomous agricultural robots using **Python** and **ROS** (Robot Operating System).
- Bridged the gap between high-level REST APIs and low-level hardware execution, writing code that directly actuated propagation and mover robots.
- Debugged complex hardware-software integration issues in a live production farm environment.

Unit21

San Francisco, CA

SOFTWARE ENGINEER

Aug. 2020 - Dec. 2021

- Maintained and optimized a fraud detection distributed system ingesting **billions of transactions**.
- Architected the “Embedded Filters” engine, a domain-specific query builder that allowed users to compose complex logical conditions; this feature became a primary revenue driver for the platform.
- Acted as a lead “firefighter” for critical production incidents, stabilizing the codebase through aggressive refactoring of legacy Python/Flask services and optimizing database query performance.

Hint Health

San Francisco, CA

APPLICATIONS ENGINEER

Jun. 2018 - Aug. 2020

- Designed the “Affiliates” synchronization protocol, enabling independent provider networks to securely share patient data and coordinate care.

University of New Mexico

Albuquerque, New Mexico

APPLICATION DEVELOPER & TEACHING ASSISTANT

Aug. 2014 - Jun. 2018

- Served as Technical Lead/TA for a Ruby on Rails MOOC with **50,000+ students**, managing automated grading systems at scale.
- Developed the OpenDaylight SDN interface for a **US Air Force** network security prototype, translating high-level policies into physical switch flow rules.
- Integrated research-grade NLP modules into legacy Java simulations for a **US Navy** Anti-Submarine Warfare grant (STTR), enabling enhanced operator spatial awareness.
- Replaced a brittle Prolog-based degree audit system with a flexible graph-based data structure, enabling complex requirement verification.

Education

University of New Mexico

Albuquerque, New Mexico

SELECTED COURSEWORK IN COMPUTER ENGINEERING (FOCUS ON HARDWARE/SOFTWARE INTEGRATION)

2014 - 2018