Rodrigo Pimenta

980-259-2752 | RodrigoPimenta102@gmail.com | linkedin.com/in/rodrigoppimenta | github.com/rodrigopimenta10 | rodrigopimenta.com | New York, NY (relocating)

Summary

Backend and platform software engineer (6+ years, Python) who builds systems that keep themselves running: self-healing automation, distributed storage, asyncio services, PostgreSQL, and CI/CD, with 24/7 on-call against a 99.9% SLA. Outside work, builds Terraform-managed services on Google Cloud.

Experience

Systems Engineer III (Software Engineering) Nov 2021 – Present
Hughes Network Systems *Germantown, MD*

- Second of 21 contributors over the last year on the satellite gateway automation platform: 491 commits across 67 delivered tickets spanning monitoring, alerting, self-healing, and reporting for five ground-segment platforms
- Root-caused and eliminated a platform-wide logging defect that silently discarded log records, cutting the log footprint from 19.68 GB to 58 MB and reclaiming ∼25 GB in production; swept all 146 scheduled jobs for the same pattern
- Root-caused two production failures: a 738 MB core dump traced with gdb to an unguarded deserialization path in a vendor gateway component, and a 177-process leak traced to a library deadlock at interpreter teardown; delivered both as actionable defect reports and shipped the supervision module that closed the leak
- Designed the platform's shared logging entry point, now used by every script and device module; introduced continuous integration to the organization; migrated the action-audit data model with 26,857 rows reconciled exactly
- Authored the platform's Kubernetes migration design covering 161 scheduled jobs and made the shared library cluster-ready (stdout log collection, service-DNS database routing, unit-tested), on a Patroni-managed high-availability PostgreSQL pair
- Lead analyst on infrastructure failure investigations and 24/7 on-call against a 99.9% availability SLA; rollback owner in formal change control, building incident timelines from core-dump metadata and process logs

Software Engineering Fellow, *Pathrise (remote): algorithms, data structures, technical interviewing* Jan 2021 – Nov 2021

Mass Communication Specialist, E-3 (Active Duty) Jan 2020 – Jan 2021
United States Navy Reserve *Great Lakes, IL / Fort Meade, MD*

- Completed basic training and the Defense Information School (DINFOS) at Fort Meade, MD; honorably discharged

Technology Analyst (Software Engineering) Jun 2018 – Dec 2019
Bank of America *Charlotte, NC*

- Developed PowerShell and Python scripts to automate software validation and hardware testing across 20+ ATM models in the enterprise lab
- Built a reusable CI/CD deployment framework in Jenkins that standardized release processes and moved builds from weekly to hourly, reducing environment setup time by 15%

Systems Built

Sightline | *Python, TypeScript/React, Google Cloud Run, Terraform, Firestore, Redis, Pub/Sub* | lunarsightline.com

- Led the 6-person team behind a lunar landing-site planner (NASA Space Apps 2026); owned architecture decisions and directed AI coding agents that wrote most of the code. Python pipeline on NASA SPICE/LOLA data matches JPL Horizons within 0.0071° over 5,469,984 hourly checks. Four Cloud Run services behind a load balancer, CDN and Cloud Armor, all in Terraform applied from GitHub Actions with no stored keys; canary deploys with automatic rollback; 2,020 tests in CI

Ceph Storage Self-Healing Monitor | *Python, uv, Fabric/SSH, PostgreSQL, Grafana, pytest*

- Sole author (77 of 79 commits, 6,586 lines, 61 tests). Monitors 24 storage nodes across 8 clusters on a 3-minute cycle and averages ∼130 verified metadata-server failovers per month with no human involvement. Failover gated by a four-verdict standby-capacity assessment so it never moves into a worse node, outcomes verified against the cluster log to distinguish a real failover from a same-node reclaim. 7-table append-only event history, 19-panel Grafana dashboard, pytest in CI

Config Integrity Self-Heal | *Python, asyncio, SFTP, PostgreSQL*

- Sole author (30 of 30 commits, 3,594 lines, 76 tests). Detects configuration drift across 18 gateways at 8 sites over SFTP and restarts the affected service, averaging ∼295 remediations per month with 89% of episodes closing inside one 10-minute polling cycle. Modernized a blocking-I/O workload onto asyncio with semaphore-bounded fan-out rather than process pools

Orbital Watch | *Python* | satellite-pass dashboard labeling each data source fresh, stale or failed | orbital.rodrigopimenta.com

Education

University of Maryland, A. James Clark School of Engineering College Park, MD
Bachelor of Science in Computer Engineering | *College Park Scholars* *Aug 2014 – Dec 2018*

Technical Skills

Languages: Python (uv, ruff, pandas, SQLAlchemy, psycopg2, Fabric), SQL, Bash, PowerShell, TypeScript/JavaScript (React)
Automation, CI/CD & Testing: Terraform, GitHub Actions, Ansible, Molecule, Jenkins, Bitbucket Pipelines, Git, pytest
Cloud, Data & Observability: Google Cloud (Cloud Run, Pub/Sub, BigQuery), Redis, PostgreSQL (Patroni HA), Grafana
Systems: Distributed Systems, REST APIs, Linux/RHEL, Docker, Kubernetes, Ceph, asyncio, gdb/core dumps, 24/7 on-call
AI Tooling: Kiro, Cursor, Claude Code