Adrian Castellanos

Senior Software Engineer

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About

Senior software engineer with 8+ years of experience designing and operating distributed backend systems at scale. Specialized in **Go** and **Rust** services, Kubernetes platforms, and developer tooling. Led the migration of a payments platform to an event-driven architecture handling 40k requests per second at 99.99% availability. Enjoys mentoring engineers, writing clear design documents, and contributing to open source, including a Rust storage engine and patches to the Go standard library. Looking for a staff-level role building reliable cloud infrastructure.

Experience

Senior Software Engineer | Nimbravo Systems — Los Angeles, CA ..... 03/2023 – Present

- Lead a 6-engineer team owning the multi-region control plane for a managed Kubernetes offering that runs 2,000+ production clusters across 14 cloud regions, serving 300+ enterprise customers.
- Designed a Raft-based configuration store in Go that cut cluster provisioning time from 11 to 3 minutes.
- Introduced OpenTelemetry tracing across 40 services, cutting mean time to resolution (MTTR) by 35%.
- Mentored 4 engineers to promotion; ran the backend interview loop.

Go – Kubernetes – etcd – Raft – OpenTelemetry – Prometheus – AWS – Helm – Grafana – Envoy

Lumenquay Pay | San Francisco, CA ..... 06/2018 – 02/2023

Software Engineer II | Payments Platform | 01/2021 – 02/2023

- Led the migration from a monolithic Rails checkout to Go microservices communicating over Kafka and gRPC, letting 12 product teams deploy independently and release daily instead of every two weeks.
- Built an idempotent ledger service processing $2B+ in annual volume with exactly-once semantics.
- Reduced p99 checkout latency from 850 ms to 210 ms through request hedging and a regional read cache.

Go – Kafka – gRPC – PostgreSQL – Redis – Terraform – Docker – Argo CD – Vault

Software Engineer I | Checkout Team | 06/2018 – 12/2020

Shipped the merchant-facing checkout SDK in TypeScript, adopted by 1,200+ merchants within its first year. Served as the primary on-call engineer for the checkout API and authored its incident runbooks.

TypeScript – Ruby on Rails – PostgreSQL – GitHub Actions – GraphQL – Docker – NGINX

Software Engineering Intern | Orbitrove Labs — Remote ..... 06/2017 – 09/2017

- Implemented a Python CLI for reproducible ML experiment tracking, later open-sourced by the company.

Python

Open-Source Projects

quill-kv | Embedded storage engine ..... 2022 – Present

Crash-safe key-value store built on an LSM tree with lock-free memtables. 2.3k stars on GitHub, used in production by 3 companies. Source: github.com/adrian-castellanos-swe/quill-kv

Rust – LSM tree – Tokio – Criterion – crossbeam – Proptest – Write-ahead logging

kubectl-pulse | Kubernetes CLI tool 2021

A `kubectl` plugin that streams live resource health of a namespace to the terminal. Accepted into the Krew plugin index, with 15k+ installs and contributions from 20 external developers.

Go – Kubernetes API – client-go – Cobra – Bubble Tea – Krew – GoReleaser

Contributor to the Go standard library 2020 – 2022

Six merged patches to `net/http` and `database/sql`, including a fix for connection-pool starvation under context cancellation and a change that cut allocations in HTTP/2 header parsing by 30%.

Go – net/http – database/sql – HTTP/2 – pprof – Gerrit

Technical Skills

Languages: Go, Rust, Python, TypeScript, C, C++, SQL, Bash
Infrastructure & Tools: Kubernetes, Docker, Terraform, AWS, GCP, PostgreSQL, Kafka, Redis, gRPC, Prometheus, GitHub Actions, Argo CD, Helm, Grafana, Envoy, Vault, NGINX, Linux
Practices: Distributed systems, system design, observability, CI/CD, code review
Also Familiar With: Java, Kotlin, C#, gRPC-Web, GraphQL, Bazel, Nix, eBPF, WebAssembly

Education

University of California, Los Angeles | Los Angeles, CA ..... 09/2012 – 06/2018

M.S. in Computer Science | GPA 3.9/4.0
09/2016 – 06/2018
Thesis: *Adaptive Consistency Levels for Geo-Replicated Databases*.
Distributed databases – Go – Jepsen – TLA+ – Cassandra – CRDTs – Raft

B.S. in Computer Engineering | Summa cum laude
09/2012 – 06/2016
Teaching Assistant for Operating Systems (CS 111) for 2 semesters.
C, C++ – Linux – x86 assembly – Verilog – GDB – Valgrind – xv6

Certifications

Certified Kubernetes Administrator (CKA) | Cloud Native Computing Foundation 2024
AWS Certified Solutions Architect – Professional | Amazon Web Services 2022
HashiCorp Certified: Terraform Associate | HashiCorp 2021

Talks & Writing

Conference Talks

Zero-Downtime Control Plane Upgrades at Scale | KubeCon + CloudNativeCon NA 11/2025
Exactly-Once Payments with Kafka Transactions | GopherCon 07/2022

Selected Articles

- "Designing Idempotent APIs," Lumenquay Pay engineering blog, 2.1k readers/month.
- "Lessons from 1,000 Postmortems: What Payment Outages Teach Us," *InfoQ*, 2024.

Languages

English | Native
Spanish | Professional working proficiency (C1)

References

Priya Raman, Director of Engineering
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Marcus Whitfield, Staff Engineer
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