# VINCENT PARRELLA

## Senior Staff Software Engineer

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## SUMMARY

Engineering leader with 20 years of experience building distributed systems — most recently the in-house game engine, GLI-certified RNG, and company-wide geolocation compliance platform behind Fanatics Betting & Gaming's real-money casino. Deep in Go, gRPC, and event-driven architecture, with a long record of taking regulated, high-throughput services from design through production.

## TECHNICAL SKILLS

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| **Languages** | Go, Java, Python, Scala, JavaScript, Bash |
| **Distributed systems** | gRPC/Connect, Kafka, Redis (incl. Streams), PostgreSQL, DynamoDB, Elasticsearch |
| **Cloud & infrastructure** | AWS, Kubernetes, Argo Rollouts, Docker, Terraform, serverless (Lambda, API Gateway) |
| **Delivery & reliability** | CI/CD, canary deployments with automated rollback, k6 load testing, Datadog observability, Splunk/ELK |

## EXPERIENCE

**Senior Staff Software Engineer — Fanatics Betting & Gaming** 02/2023 – Present

- Core engineer on ROCK, FBG's in-house real-money game engine (Go, gRPC/Connect, Redis, PostgreSQL), taking it from prototype to production: designed distributed matchmaking, leader-election failover with graceful drain and stake/round recovery, Redis Streams real-time event feeds, and transaction-integrity safeguards preventing double settlement — enabling first-party casino titles (launch title: Crash) without third-party RGS revenue share.
- Built fbg-rng, the company's standalone random number generation service (Go, gRPC), from inception through GLI certification: validated at 65K req/sec with sub-50µs p95 latency under 4× expected peak load and 4-hour soak stability; passed security pentest with zero findings; implemented a statistical verification battery (chi-squared, Kolmogorov–Smirnov, variance) in CI and a CLI tool generating terabyte-scale datasets for the certification lab.
- Architected and built FBG's geolocation compliance platform (Java/Spring Boot, Redis, Kafka, gRPC + client SDK) wrapping the GeoComply vendor integration, originally for casino; the architecture proved so effective that sportsbook adopted it — cloned per my recommendation for cloud-native isolation and a zero-downtime cutover — making it the company-wide geolocation architecture, running on every bet placement across all products; load-validated at 10K+ req/sec with p95 under 14ms and continuously verified via synthetic monitoring.
- Established progressive-delivery and performance engineering practices adopted across tier-1 services: Datadog error-rate-gated Argo Rollouts canary deployments with automatic rollback and incident paging, post-deploy integration test gates (FAST), and k6/Testkube load-testing pipelines used to validate production launches.
- Mentored 4+ engineers, providing sustained technical coaching and career guidance that led to multiple promotions — including advancement to the senior staff level.

**Senior Software Engineer — Twitter** 06/2021 – 11/2022

- Rebuilt the Customer Notification Service client API, introducing detailed delivery-result information and thorough exception handling.
- Designed and implemented the Cascading Delete Framework, enabling developers to remove relationships stored across several microservices when business events occur.
- Implemented the new ad account creation backend in Twitter Business Settings.
- Outfitted the team's highest-traffic service with audit logging to adhere to Twitter security and data privacy policies.

**Principal Software Engineer — Comcast, Philadelphia, PA** 09/2017 – 06/2021

- Architected and led engineering of the cloud-native infrastructure for the Digital Asset Management (DAM) marketing environment, built on Infrastructure as Code, CI/CD, and an always-forward deployment methodology.
- Designed and deployed a serverless, event-based data flow and routing system serving all marketing channels across Comcast, with distributed logging via Kinesis and Elasticsearch.
- Rebuilt the xfinity.com "customer move" functionality on API Gateway, Lambda, and DynamoDB.
- Built a set of AWS Lambda "blueprints" — developer-enablement projects that let teams clone a repo and provision a secure, serverless API in AWS with a single command.

**Senior Software Engineer — Comcast, Philadelphia, PA** 06/2013 – 09/2017

- Engineering lead of the X1 Upsell platform, letting customers add a-la-carte channels directly from their TV; owned the full design across offer ingestion, presentation, fulfillment, and billing.
- Created the Watch Immediately feature for seamless playback of newly purchased content, plus services providing analytics on revenue generated.
- Lead contributor to the Comcast Multi-Tenancy Initiative, including the ingest service for metadata describing localized cable systems for Comcast and its partners.
- Built the real-time delivery service for personalized grid and on-demand metadata on the X1 platform, handling high-traffic peak loads and time-sensitive data.

## EARLIER EXPERIENCE

Software Engineer (Contract) — Apex Systems for Comcast, Philadelphia, PA 10/2012 – 06/2013
Senior Software Developer — Profit Point, Clifton Heights, PA 04/2011 – 10/2012
Support Developer — Airclic, Trevose, PA 12/2009 – 04/2011
Advanced Software Engineer — Kulicke & Soffa, Fort Washington, PA 06/2006 – 12/2009
Design Engineer — Crestron Electronics, Rockleigh, NJ 09/2005 – 06/2006
Engineer — Panacea Technologies, Fort Washington, PA 06/2004 – 09/2005

## PATENTS

**"Ordered Execution of Tasks"** — Jonathan Moore and Vincent Parrella. U.S. Patent 10,091,288 B2, issued October 2, 2018.

## EDUCATION

- **M.S. Electrical Engineering** — Lehigh University, Bethlehem, PA
- **B.S. Electrical Engineering** — Lehigh University, Bethlehem, PA