

FRANK GOMEZ

Principal Data Systems Engineer | Control-First Architecture | Decision Infrastructure

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POSITIONING SUMMARY

Principal-level data systems operator specializing in architecting and governing complex, high-leverage systems under real constraints. Designs for control, observability, bounded execution, and long-term correctness over short-term feature velocity. Owns cross-system ambiguity end-to-end: definition → constraint modeling → execution → rollback-safe operation.

OPERATING POSTURE

- Control-first, evidence-driven system design
- Explicit ownership, traceable decisions, reversible change
- Failure-aware architecture with bounded blast radius
- Signal integrity prioritized over feature throughput
- Operates fluidly between executive framing and deep technical inspection

CONTROL ASSUMPTIONS

- Systems are untrustworthy without direct observability
- All material decisions must be attributable and auditable
- Rollback is a first-class capability
- Automation operates within explicit authority bounds
- Silent failure is treated as active risk

EXECUTIVE CONTROL LAYERS

- 1. Architecture & Platform Governance:** Boundaries, coupling, failure domains
- 2. Data & Decision Infrastructure:** Signal production, validation, correctness under load
- 3. Operational Control Surfaces:** Human visibility and safe intervention
- 4. Reliability & Incident Governance:** Detection, containment, recovery
- 5. Automation & Delivery Systems:** Gated, auditable, rollback-aware change
- 6. Infrastructure & Runtime Stewardship:** Isolation, scaling, failure containment
- 7. AI-Augmented Systems:** Bounded autonomy with auditability and evaluation

SYSTEM ARCHITECTURE & PLATFORM DESIGN

PHP · Python · Bash/Shell · MVC · REST APIs
Service Boundaries · Dependency Isolation
Modular Design · JSON · Event Triggers
Interface Stability · High-Availability Design

DATA, STREAMING & DECISION INFRASTRUCTURE

MySQL · PostgreSQL · MQL4 · Win-Power Automate
Anomaly Detection · ETL · ELT · Data Modeling
Schema Versioning · Data Validation · Time-Series
Design · Business Logic & Signal Processing Pipeline

OPERATIONAL CONTROL SURFACES & DASHBOARDS

React · Request Tracing · JavaScript · Tailwind CSS
Grafana · Admin Consoles · Control Panels · KPI
Dashboards · Drilldown Views · Structured Logging
Highcharts · Application Monitoring

OBSERVABILITY, RELIABILITY & INCIDENT GOVERNANCE

Rollback · Structured Logging · Health Checks
Service Reliability Standards · Prometheus
Incident Response · Alert Routing

**AUTOMATION & DELIVERY
SYSTEMS**

GitHub · GitLab · CI/CD · Deployment Pipelines
Cron · Job Schedulers · Workflow Engines
Runbooks · Policy Gates · Rollback Automation
Change Control · Artifact Versioning · Node.js

**INFRASTRUCTURE & RUNTIME
STEWARDSHIP**

Linux · Windows Server · VMware · ESXi · vCenter
Fleet Ops · Docker · RHEL · Cloud Networking
Load Balancers · DNS · cPanel/WHM · VPS Clusters
Virtualized Infrastructure Management

CORE CAPABILITIES

- Architect distributed systems with explicit control boundaries
- Build decision-grade data pipelines with latency and integrity guarantees
- Design operator dashboards as decision instruments, not status walls
- Implement safe automation with encoded invariants and rollback paths
- Lead incident response and institutional reliability improvements
- Govern infrastructure lifecycle with predictability and cost discipline
- Embed AI systems with bounded authority and evaluable outputs

ROLE FIT

- Principal / Staff engineering roles with cross-system ownership
- Founding or scaling CTO mandates
- Reliability-critical, regulated, or high-risk environments
- Organizations where long-term system integrity outweighs short-term velocity

PROFESSIONAL EXPERIENCE

SOURCE SYSTEMS

Founder & Data Platform Engineer

2020 – Present

- Designed and maintained backend systems supporting transactional data processing and analytical reporting workflows
- Architected MySQL, MS SQL Server, and PostgreSQL schemas with explicit consistency boundaries, versioned migrations, and production-safe change management
- Built operator dashboards and telemetry interfaces using custom PHP backends and JavaScript-based UI layers
- Developed data processing routines for aggregation, KPI materialization, anomaly monitoring, and structured reporting
- Implemented structured logging, query performance tuning, and deterministic debugging workflows to eliminate silent failure modes
- Automated deployment and environment configuration across VPS/cloud infrastructure and Docker-based runtimes
- Established monitoring, recovery procedures, and operational safeguards to maintain data correctness under live load
- Owned full lifecycle system delivery: schema design, backend implementation, deployment, monitoring, and iterative optimization

SOURCE ENTERPRISES

Founder & Lead Application Engineer

2014 – 2020

- Designed and delivered full-stack PHP/MySQL web applications for client-facing businesses
- Built dynamic form-processing systems with validation logic, conditional workflows, file handling, and persistent relational storage

- Developed multi-user platforms with authentication, session management, and role-based access controls
- Created administrative dashboards for customer management, submission tracking, reporting, and operational workflow management
- Modeled and maintained relational database schemas supporting transactional integrity and reporting accuracy
- Optimized backend queries and application performance under live user usage
- Implemented responsive front-end interfaces using JavaScript and modern CSS frameworks
- Managed deployment environments, hosting configuration, server troubleshooting, and production debugging
- Translated business requirements into technical architecture and iterative production releases

ROCHESTER ENTERPRISES

Systems Developer

2012 – 2015

- Designed and maintained internal web-based dashboards for pharmaceutical distribution tracking, inventory visibility, and financial reporting.
- Developed database-driven reporting interfaces with filtering, reconciliation workflows, and export capabilities for operational oversight.
- Built and maintained relational data models supporting order tracking, compliance documentation, and transaction history.
- Implemented role-based access controls and secure data handling across internal administrative systems.
- Optimized backend queries and application performance to improve reporting speed and operational visibility.

IEQUITY CORP

Chief Technology Officer – E-Commerce & Regulated Payments Platform

2013 – 2014

- Defined and led the architecture of a regulated online payment and transaction processing platform, including transaction lifecycle design, state handling, and operational workflows
- Directed integration of third-party payment gateways and processing services, establishing transaction validation, reconciliation logic, and failure-handling strategies
- Designed internal reporting dashboards for transaction monitoring, settlement reconciliation, and executive financial visibility
- Oversaw infrastructure provisioning, deployment strategy, and production reliability during active commercial operations

COMPLIANCE FOUNDATION

Chief Creative Officer / Data Systems Lead – International Financial Platforms

2010 – 2013

- Designed and directed development of cross-border financial compliance systems supporting international clients across regulated jurisdictions
- Built data-driven operational interfaces for document workflows, risk categorization, and compliance reporting
- Developed structured data models and secure application layers enabling auditability and jurisdiction-specific policy enforcement
- Delivered executive-level system design presentations and technical proposals for financial institutions exploring digital asset and international banking workflows

EDUCATION

California State University, San Bernardino
Computer Science & Information Systems

RELATED ARTIFACTS

This document is the **primary control-oriented summary**.

For deeper inspection, the following artifacts are intentionally provided:

Detailed Control Architecture & Technology Surface Resume

A comprehensive architectural view of the systems I design and govern, organized by control model rather than job title.

- Full governance model across Executive Control Layers (architecture, data, operations, automation, infrastructure, AI)
- Explicit technology surface mapping — platforms, runtimes, tooling, and decision infrastructure
- Structured execution model: operating profile, system themes, competencies, and inspection anchors

This document represents the complete structural view behind the concise resume.

→ [*Control Architecture Resume*](#)

Operating Principles & Proof: Case Studies (0–7)

Applied system narratives demonstrating how control, governance, and decision integrity operate under real-world pressure, ambiguity, and failure conditions.

- Seven structured case studies spanning architecture, automation, reliability, and intelligence layers
- Each case focuses on a specific control dimension rather than general storytelling
- Includes cross-case synthesis to surface recurring structural patterns

These cases show how the control model manifests under real operational constraints.

→ [*Operating Principles & Proof*](#)

Structured System Resume

A structured resume-format presentation of system ownership, scope, and operating posture, designed for recruiter and hiring-manager review.

- Organized in conventional resume sections for fast scanning
- Emphasizes responsibility scope, and system-level impact
- Frames control architecture within recognizable role expectations

This artifact provides a familiar entry point for standard hiring workflows while preserving the integrity of the operating model.

→ [Structured Systems Resume](#)

Historical Portfolio Resume Archive

Two previously published resume artifacts reflecting earlier leadership roles in design, marketing, and systems strategy.

- Structured visual formats with full portfolio integration
- Design-forward presentation and narrative positioning
- Cross-functional leadership across product, brand, and execution

These materials represent prior career phases and are provided for historical and structural context.

→ [Resume Archive](#)

CLOSING

This document is a condensed control-oriented profile. Detailed artifacts are available for deeper technical or narrative inspection.