Martin Navarrete

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SUMMARY

Strategic and results-driven Principal Software Architect with 12+ years of leadership in designing, building, and scaling high-availability distributed enterprise systems across global eCommerce, public sector, energy, and multinational manufacturing domains. Expert in microservices architecture, event-driven architectures (Kafka, RabbitMQ), distributed caching strategies (Redis), Domain-Driven Design (DDD), and cloud modernization on Microsoft Azure and Pivotal Cloud Foundry (PCF). Demonstrated history of architecting massive latency reductions and throughput improvements, including slashing POD summary API latency from 12s to under 500ms across 21 countries at CEMEX via Redis caching middleware, and directing architecture for dell.com Cart microservices serving 100+ countries. Recipient of the 2024 Dell GRIT Award. Holds a Master of Science in Data Science (Dec 2023). Pioneer in establishing engineering governance for AI-augmented development workflows, Model Context Protocol (MCP) context integration, and strict human-in-the-loop quality gates to accelerate system delivery while safeguarding architectural integrity, IP security, and production resilience. Authorized to work in the US for any employer (TN Visa / USMCA eligible; H-1B transferable).

TECHNICAL SKILLS

- Architecture & System Design: Distributed Systems Architecture, Microservices, Event-Driven Architecture, Domain-Driven Design (DDD), N-Tier Systems, Onion Architecture, High Availability (HA), Disaster Recovery, Service-Oriented Architecture (SOA), API Gateway Pattern, Circuit Breakers, Architectural Decision Records (ADRs)
- AI & Agentic Governance: Model Context Protocol (MCP) Context Architectures, AI-Assisted Architecture Scaffolding, Structured Prompt Engineering, Vibe Coding Governance, Human-in-the-Loop (HITL) Quality Gates, AI Hallucination Auditing, Secure AI Policy Enforcement
- Languages & Frameworks: C# (12+ years), .NET Core 6/8, .NET Framework 4.8, ASP.NET Web API, Python, SQL, LINQ, TypeScript, JavaScript
- Cloud & Infrastructure: Pivotal Cloud Foundry (PCF), Microsoft Azure (VMs, App Services, Blob Storage, Azure API Management, CosmosDB), Docker, Kubernetes, Terraform, CI/CD Architecture (GitLab Pipelines, Azure DevOps, TeamCity, Octopus Deploy)
- Caching & Streaming: Redis Distributed Caching & Invalidation Architecture, Apache Kafka Event Streaming, RabbitMQ Message Queuing
- Data Architectures: SQL Server (Advanced T-SQL, Index Tuning, Partitioning, Execution Plans), MongoDB (Aggregation Pipelines, Clustering), PostgreSQL, Oracle DB, CosmosDB
- Observability & Reliability: Splunk Enterprise, Dynatrace Full-Stack APM, Tableau, PowerBI, Lighthouse Synthetic Testing, Boomerang RUM, Chaos Testing Principles, Root Cause Analysis (RCA)

WORK EXPERIENCE

Principal Software Architect & Senior Lead

Dell Technologies – Austin, TX
June 2022 - September 2026

Role Description: Directed architectural patterns, service boundaries, and data schemas for dell.com Cart and Checkout microservices ecosystem deployed across 100+ countries on Dell Pivotal Cloud Foundry (PCF).

- Defined architectural patterns, service boundaries, and data schemas for dell.com Cart and Checkout microservices ecosystem deployed across 100+ countries on Dell Pivotal Cloud Foundry (PCF).

- Impacted by a corporate workforce reduction in September 2026, concluding tenure as a consistently high-performing architectural leader and recipient of the 2024 GRIT Award.
- Formulated and documented Architectural Decision Records (ADRs), interface contracts, and distributed caching standards in Confluence to ensure consistency across globally distributed engineering teams.
- Applied Master of Science in Data Science foundation to model distributed system telemetry, isolating multi-hop network latencies and client-side Time-To-Live (TTL) regressions across regional deployments.
- Established team-wide architecture governance for AI-assisted engineering: established Model Context Protocol (MCP)-compatible context patterns to feed API schemas, domain models, and service contracts into AI assistants for deterministic code generation.
- Directed prompt engineering standards and vibe coding review protocols across the team, requiring line-by-line validation, dependency security audits, and automated regression checks on all AI-assisted code contributions before merge.
- Architected resilient caching and messaging topologies using Redis, RabbitMQ, and Apache Kafka, eliminating single points of failure and guaranteeing sub-second response times during peak holiday shopping surges.
- Designed automated GitLab CI/CD pipelines integrating static code analysis, unit testing, container vulnerability scanning, and automated blue-green deployments to PCF.
- Led technical design reviews and mentored tech leads and senior engineers on DDD, SOLID, and Onion Architecture principles.

Principal Software Engineer & Lead Architect

Alliance IT CJIS – Austin, TX

May 2020 - June 2022

Role Description: Directed solutions architecture and system design for TechShare judicial and law enforcement platforms for the Texas Conference of Urban Counties.

- Architected secure, modular multi-tenant systems in .NET Framework MVC/Razor and .NET Core WebAPI with React, integrated with Azure SQL and Entity Framework Core.
- Established system design documentation, security standards (CJIS compliance), and architectural blueprints; conducted daily architectural reviews and code governance across multiple engineering squads.
- Architected enterprise cloud infrastructure utilizing Azure Blob Storage, Redis caching, and Docker containers, ensuring high availability during peak legal and booking hours.
- Designed robust continuous delivery pipelines in TeamCity and Octopus Deploy, cutting deployment cycles and achieving zero-downtime releases.

Principal Software Engineer & Modernization Architect

Alliance IT Dell – Austin, TX

August 2019 - May 2020

Role Description: Architected the comprehensive modernization of Dell's Customer Integration Layer (CIL) gateway from legacy WCF SOAP to .NET Core 3.0 RESTful microservices.

- Preserved backward compatibility and zero API downtime for over 25 mission-critical client applications across global business units consuming customer master data.
- Architected and executed the enterprise migration from TFS/TeamCity/Octopus to GitLab CI/CD pipelines and Pivotal Cloud Foundry (PCF) PaaS.
- Optimized enterprise data access layer across heterogeneous data sources including Oracle DB, SAP, MySQL, and NoSQL databases.

Senior Software Engineer & Systems Architect

Alliance IT PG&E – Walnut Creek, CA

February 2019 - August 2019

Role Description: Architected high-throughput data aggregation REST microservices in .NET Core for the PG&E Wildfire Safety and Emergency Decision Support Systems.

- Engineered multi-threaded asynchronous C# architectures to ingest and synthesize streaming telemetry and geospatial data simultaneously from Google Maps APIs, relational databases, and Redis caches.

- Architected and executed the zero-downtime database upgrade and schema migration from MongoDB 3.4 to 4.0, optimizing sharded cluster performance and replica set configurations.
- Implemented enterprise-grade API security models adhering to OAuth 2.0, JWT Tokens, API Key management, and corporate Single Sign-On (SSO).

Tech Lead & Enterprise Solutions Architect

CEMEX – Monterrey, Mexico

February 2017 - February 2019

Role Description: Directed .NET middleware architecture and delivery for CEMEX GO global digital transformation platform across 21 countries.

- Slashed Point of Delivery (POD) summary API latency from 12 seconds to under 500ms (over 95% reduction) by architecting an innovative Redis caching middleware layer.
- Designed and governed scalable enterprise RESTful APIs using C#, ASP.NET Web API v2, Entity Framework, and Azure API Management, exposing secure endpoints for Android, iOS, web, and B2B partners.
- Conducted deep-dive SQL Server execution plan analyses, redesigning indexing topologies and query patterns to resolve severe database concurrency bottlenecks.
- Established automated CI/CD and testing governance using Microsoft Azure DevOps (Pipelines, Test Plans, Artifacts), SonarQube, and Selenium automation.
- Traveled internationally to the Czech Republic and Hungary to conduct architectural enablement, onboard local engineering teams, and document systems for IBM Tier 2/2.5/3 support teams.

Middle Software Engineer & Module Architect

Interfactura – Mexico City, Mexico

March 2016 - February 2017

Role Description: Architected and implemented the re-engineering of the Payment Supplement Module and Invoicing core subsystems for multinational enterprise supply chains.

- Designed the JUNO financial factoring bridge architecture, enabling automated B2B credit invoice processing with 2-week continuous delivery cycles via TeamCity and Git under Scrum.
- Implemented Domain-Driven Design (DDD) architecture for the insurance Risks module (CHUBB/ACE/ABA) using HTML5, CSS3, jQuery, and ASP.NET MVC.

ASP.NET Developer & Systems Analyst

CDIS UANL – Monterrey, Mexico

January 2014 - February 2016

Role Description: Architected and developed a full-stack Logistics Management Platform in ASP.NET MVC, C#, SQL Server, and AngularJS with custom heuristic route optimization.

EDUCATION

Master of Science in Data Science

Universidad Autonoma de Nuevo Leon, Monterrey, Mexico

January 2022 - December 2023

Bachelor of Science in Computer Science

Universidad Autonoma de Nuevo Leon, Monterrey, Mexico

June 2011 - January 2014

LANGUAGES

English: Native or Bilingual Proficiency

Spanish: Native or Bilingual Proficiency