Martin Navarrete

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SUMMARY

Accomplished Senior Software Engineer with 12+ years of extensive experience designing, developing, and operating high-throughput, distributed enterprise systems using C#, .NET Core, microservices, and cloud architectures. Proven expertise in architecting resilient backends, sub-second latency optimizations, and event-driven data pipelines for global platforms, including dell.com eCommerce Cart services serving 100+ countries and CEMEX global logistics across 21 countries. Winner of the 2024 Dell GRIT Award for technical excellence and initiative. Holds a Master of Science in Data Science (Dec 2023), applying advanced statistical analysis to production observability and system performance. Pioneer of engineer-led, AI-assisted software workflows—leveraging GitHub Copilot, prompt engineering, Model Context Protocol (MCP) context patterns, and agentic task decomposition while maintaining strict human-in-the-loop ownership, quality gates, and code verification before production release. Authorized to work in the US for any employer (TN Visa / USMCA eligible; H-1B transferable).

TECHNICAL SKILLS

- Languages & Runtimes: C# (12+ years), .NET Core 6/8, .NET Framework 4.8, ASP.NET MVC, Web API, Angular (v14–v16), TypeScript, JavaScript, HTML5/SCSS, Python, SQL, LINQ
- Frontend & Testing: Angular (Components, Services, Modules), RxJS (Observables, Reactive Patterns), Karma, Jasmine, Playwright (E2E & Response-Time Testing), Postman Flow, Lighthouse Synthetic Testing
- AI-Augmented Engineering: GitHub Copilot, Model Context Protocol (MCP), Structured Prompt Engineering, Vibe Coding Workflows, Agentic Task Decomposition, Human-in-the-Loop (HITL) Review, AI Hallucination Detection & Correction, Secure AI Usage & Guardrails
- Architecture & Patterns: Microservices, Distributed Systems, Event-Driven Architecture, Domain-Driven Design (DDD), SOLID Principles, Onion Architecture, Test-Driven Development (TDD), Multi-threading, RESTful APIs, Zero-Downtime Deployment
- Cloud & Infrastructure: Pivotal Cloud Foundry (PCF), Microsoft Azure (VMs, App Services, Blob Storage, API Management, CosmosDB), Docker, Terraform, GitLab CI/CD, Azure DevOps, TeamCity, Octopus Deploy
- Messaging & Caching: Apache Kafka, RabbitMQ, Redis Dynamic Caching & Invalidation, Event Streaming, Distributed Locking
- Databases: Microsoft SQL Server (Advanced T-SQL, Execution Plans, Index Tuning, Stored Procedures), MongoDB (Aggregation Framework), PostgreSQL, Oracle DB, CosmosDB
- Observability & Testing: Splunk, Dynatrace, Tableau, PowerBI, Lighthouse Synthetic Testing, Boomerang Real User Monitoring (RUM), NUnit, Selenium, MSTest, Postman Flow

WORK EXPERIENCE

Senior Software Engineer

Dell Technologies – Austin, TX

June 2022 - September 2026

Role Description: Engineered and maintained high-traffic Cart and Checkout microservices powering dell.com across 100+ countries within Dell's Pivotal Cloud Foundry (PCF) ecosystem.

- Architected, developed, and deployed high-throughput .NET Core 6 microservices powering the global dell.com Cart and Checkout experience 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 engineer and recipient of the 2024 GRIT Award.
- Leveraged Master of Science in Data Science knowledge to architect advanced, data-driven approaches for complex system challenges, telemetry correlation, and performance anomaly detection.
- Pioneered engineer-led, AI-assisted software execution to accelerate development velocity without relying on unchecked autonomous orchestration, operating as the primary reasoning and validation layer.
- Applied structured prompt engineering techniques—including role-framing, few-shot examples, chain-of-thought decomposition, and context window management—to direct GitHub Copilot for code generation, refactoring, and test scaffolding.
- Practiced disciplined vibe coding workflows: utilized AI code generation for accelerated first-pass drafting, followed by rigorous manual code review, logic trace validation, and system contract alignment before integration.
- Maintained explicit human ownership and strict quality gates over all production code, systematically identifying and correcting AI hallucinations—including phantom API methods, incorrect async/await patterns, and LINQ expression errors—prior to pull request approval.
- Applied agentic task decomposition to break complex, multi-service features into bounded, context-isolated subtasks to minimize context drift and eliminate regression risks.
- Leveraged Model Context Protocol (MCP)-compatible context-feeding patterns to integrate codebase schemas, service contracts, and API definitions into AI tooling for grounded code generation.
- Enforced strict prompt hygiene and corporate security guardrails, ensuring no PII, secrets, or proprietary Dell IP entered external AI models.
- Designed and implemented distributed caching architectures using Redis and message queuing via RabbitMQ and Kafka, preventing database contention and ensuring sub-second response times during peak seasonal shopping traffic.
- Ingested and correlated telemetry across Lighthouse, Boomerang (RUM), Splunk, and Dynatrace; applied statistical correlation analysis to isolate and eliminate Cart view Time-To-Live (TTL) latency regressions across 100+ countries.
- Built automated observability and reliability dashboards in Dynatrace, Splunk, Tableau, and PowerBI, tracking Cart health, conversion, and P50/P95/P99 latency distribution curves.
- Mentored junior and mid-level engineers in daily code reviews, establishing team standards for SOLID, DDD, TDD, Onion Architecture, and responsible AI-augmented engineering practices.
- Designed and maintained automated CI/CD pipelines in GitLab, managing build, test, security scanning, and deployment stages.

Principal Software Engineer

Alliance IT CJIS – Austin, TX

May 2020 - June 2022

Role Description: Directed software architecture and engineering delivery for TechShare judicial and court management enterprise platforms for the Texas Conference of Urban Counties.

- Architected and implemented distributed web applications in .NET Framework MVC/Razor and .NET Core WebAPI with React frontends, integrated with Azure SQL and Entity Framework Core.
- Established software architecture guidelines, design definitions, code patterns, and data schemas documented in Confluence; conducted daily code reviews across engineering teams.
- Implemented Azure Blob Storage, Redis caching, and Docker containerization to ensure platform scalability and high availability under heavy filing surges.
- Designed automated build and deployment pipelines using TeamCity and Octopus Deploy, establishing continuous integration and zero-downtime releases.

Principal Software Engineer

Alliance IT Dell – Austin, TX

August 2019 - May 2020

Role Description: Architected and executed modernization of Dell's global Customer Integration Layer (CIL) gateway from legacy WCF SOAP to high-performance .NET Core 3.0 RESTful APIs.

- Maintained backwards compatibility and 99.99% availability for an enterprise integration gateway consumed by 25+ internal and external Dell client applications globally.

- Spearheaded the enterprise migration of source control and CI/CD pipelines from TFS, TeamCity, and Octopus to GitLab Pipelines and Pivotal Cloud Foundry (PCF).
- Authored complex Oracle DB stored procedures and integrated cross-platform data pipelines across SAP, Oracle, MySQL, and NoSQL datastores.

Senior Software Engineer

Alliance IT PG&E – Walnut Creek, CA

February 2019 - August 2019

Role Description: Architected and built high-volume .NET Core RESTful microservices for PG&E Wildfire Safety and Emergency Decision Support Systems.

- Engineered multi-threaded asynchronous C# solutions to ingest, transform, and serve geospatial and telemetry data simultaneously from Google Maps APIs, relational databases, and Redis caches.
- Authored optimized MongoDB Aggregation pipelines and PostgreSQL stored procedures, and successfully executed enterprise migration from MongoDB 3.4 to 4.0.
- Implemented secure API access protocols adhering to OAuth, JWT Token, API Key, and enterprise Single Sign-On (SSO) standards; automated CI/CD with Jenkins, SonarQube, and PowerShell.

Tech Lead & Software Engineer

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 response latency from 12 seconds to under 500ms (over 95% reduction) by engineering a custom Redis caching middleware layer tailored for customers managing dozens to hundreds of active delivery locations.
- Designed and exposed scalable RESTful APIs using C#, ASP.NET Web API v2, Entity Framework, and Azure API Management for consumption by Android, iOS, web, and enterprise B2B clients.
- Analyzed SQL Server execution plans and refactored indexing strategies, stored procedures, and LINQ queries to eliminate high-volume database bottlenecks.
- Led DevOps automation using Microsoft Azure DevOps (Repos, Pipelines, Test Plans, Artifacts), SonarQube, and automated UI testing with Selenium and C#.
- Conducted international technical enablement missions to Czech Republic and Hungary, onboarding regional engineering teams and authoring technical documentation for IBM Tier 2/2.5/3 support teams.

Middle Software Engineer

Interfactura – Mexico City, Mexico

March 2016 - February 2017

Role Description: Engineered B2B financial factoring and electronic invoicing subsystems for enterprise supply chain partners.

- Re-architected and re-developed Payment Supplement and Invoicing subsystems for enterprise supply chain partners using ASP.NET MVC and SQL Server.
- Built the JUNO B2B financial factoring and accounts receivable bridge, implementing 2-week continuous delivery cycles via TeamCity and Git under Scrum.
- Designed and developed Domain-Driven Design (DDD) frontend modules for multinational insurance client (CHUBB/ACE/ABA) in HTML5, CSS3, jQuery, and ASP.NET MVC.
- Created and tuned complex SQL Server stored procedures, functions, triggers, and indexes in production environments.

ASP.NET Developer & Analyst

CDIS UANL – Monterrey, Mexico

January 2014 - February 2016

Role Description: Developed full-stack logistics management and route optimization platforms for commercial fleet operations across Mexico.

- Developed an end-to-end Logistics Management Platform in ASP.NET MVC, C#, SQL Server, and AngularJS for fleet, cost, route, and customer management across Mexico.
- Implemented route calculation algorithms integrating Google Maps APIs and proprietary heuristics for optimal cost routing.
- Designed partial views, master pages, and reusable framework components following ASP.NET MVC and CMMI Level 3 quality standards.

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