DAVID BAILEY

Principal Architect | Full-Stack .NET & Azure | AI-Native Engineering
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PROFESSIONAL SUMMARY

Full-stack Principal Architect with 20+ years across C#/.NET, ASP.NET Core, and Angular, most recently sole architect and developer at Syntriq Health, designing and orchestrating a four-system Azure claims-processing suite: policy-driven workflows, event-driven integration, and application-level controls built against HITRUST CSF and SOC 2 criteria. Deep experience integrating across regulated, multi-system enterprise environments (Cigna, Clearwave, Norfolk Southern, Syntriq) with Managed Identity, Key Vault, and OAuth2/JWT-secured APIs as standing practice. Daily practitioner of AI-assisted engineering with Claude Code and GitHub Copilot, built for fast, disciplined ramp-up on new domains. Microsoft Certified: Azure Administrator Associate (AZ-104). USMC veteran.

PROFESSIONAL EXPERIENCE

Principal Architect (promoted from Senior ASP.NET Developer, Apr 2026) | Syntriq Health

Sept 2025 - May 2026

- Sole architect of a four-system Azure claims-processing suite (Workers' Comp, Liability Claims, IPPS pricer, OPPS pricer) across 16 jurisdictions; $7MM+ estimated business value (per CIO).
- Built a 'spec-book': a playbook (standing build rules) paired with a spec (business requirements) that directs Claude Code to build IaC, docs, and code for any feature, bug fix, or new project. Stood up four systems on spec-book discipline; three reached UAT within six weeks.
- Playbook matured on Workers' Comp carried its hardening into Liability Claims, a structurally different app, proving the spec-book works across solutions, not a single app. Guardrails let the business state specs in plain English; the playbook enforced logging, error handling, and regression.
- AI accountability: tracked change requests and bug fixes via wikis, change logs, and semantic versioning; built 500+ unit/regression tests alongside features. Flagged requirements gaps, troubleshot deployments, analyzed field bugs from recordings and logs.
- Redesigned Workers' Comp intake for event-triggered, line-item-level processing: an EDI-import trigger hands claims to microservices in near real time, aggregating costs into the Maximum Recoverable Amount, replacing an overnight-batch flow where claims weren't available until the next run.
- Cut average time-to-adjuster contact from 90+ minutes toward 10 via API-driven intake redesign, driven by claims lost to a 30-day billing cap, denial-driven rework, and adjuster throughput. Recognized mounting compliance risk in an AI voice agent posing as a human adjuster and began replacing it with direct claim-status API integration.
- Architected a multi-jurisdiction rules engine using SOLID and Interface Segregation, enabling new-state deployment in days rather than months with zero changes to core routing logic. Isolated each jurisdiction's payment rules into its own library for a single apples-to-apples output, cheap to extend to new states.
- Packaged shared logic as small NuGet packages (C# 8 default interfaces) for backward/forward compatibility: fixes made once, adopted per project, no lockstep upgrades.
- Built HITRUST/SOC2 compliance posture from scratch. Standing security policy: every identity defaults to managed identity at minimum role (least privilege), secrets stay out of code, infrastructure is policy-checked IaC, repeated on every system rather than caught in review. Engineered credential-free service-to-service authentication via SAMI.
- Built a real-time ETL pipeline isolating high-volume workloads from production, reducing monthly Azure SQL I/O from 1,000+ units to on-demand scaling.
- Vendor containment: hedged a fragile CMS.gov data dependency against runaway resource bloat (1,000+ DTUs) through container isolation instead of full remediation, so upgrade cadence and hosting cost moved from vendor-controlled to business-controlled. Containerizing CMS.gov's IPPS/OPPS Pricer needed no in-house Java or COBOL hire.

- Co-developed load (NBomber), regression, and unit test suites with Claude Code, delivering QA-team validation depth on a compliance-gated release cadence.

  Technologies: Azure Container Apps, Docker, Azure SQL, HITRUST/SOC2, Claude Code, NBomber

Cloud Architect | Just-In-Time Concept Pathfinders

Oct 2024 - Jul 2025

- Architected a high-volume webhook ingestion pipeline (Azure Service Bus to Azure SQL Hyperscale) with separated read/write and read-only contexts.
- Introduced containerization from zero: established Docker best practices for Azure Functions and SQL Server images.
- Created Azure DevOps pipelines (workload-identity-federated CI/CD) using GitHub Copilot to author ARM templates.

  Technologies: Azure Service Bus, SQL Hyperscale, Docker, GitHub Copilot, ARM Templates

Solution Architect | Norfolk Southern - Atlanta, GA (Hybrid)

Apr 2023 - Jun 2024

- Architected an offline-capable field application using SQL Server Service Broker to synchronize local instances with Azure SQL over VPN, fully transparent to the legacy Microsoft Access UI, requiring zero UI changes.
- Legacy modernization: replaced a decades-old, fragile MS Access replication scheme with a modern sync layer while repairing live data corruption in the master replica mid-transition.
- Designed schema and T-SQL objects (tables, views, stored procedures, functions) enabling legacy system communication through a local SQL Server instance.
- Directed backend development and destructive testing, ensuring recovery from synchronization failures for data offline multiple hours at a time.
- Built a test platform validating Service Broker messaging across varied connectivity and server-location scenarios, decoupling the UI to break testing into discrete, verifiable chunks.
- Authored PowerShell test packages validating 30+ database objects: message creation, XML schema validation, and visualized results.

  Technologies: C# / .NET Core, SQL Server 2022 Service Broker, PowerShell, Azure Repos

Data Architect | Satcom Direct - Melbourne, FL (Remote)

Aug 2020 - Mar 2023

- Led a 7-person offshore/onshore data architecture team (5 offshore, 2 onshore) designing scalable data warehouse solutions processing billions of records; improved query performance by 30% through materialized views, indexing optimization, and T-SQL query refactoring for OLTP environments.
- Architected ETL data pipeline review processes and implemented Azure DevOps CI/CD best practices for SQL Server schema deployments, enabling consistent database versioning and rapid iteration across distributed teams.
- Built a secure, scalable data accessibility platform using Entity Framework/EF Core with SQL Server, Telerik Reports for real-time analytics, and Azure infrastructure; enhanced data security and reduced reporting latency by 30%.
- Built new Angular/TypeScript features with OAuth2/JWT-secured APIs.

  Technologies: SQL Server 2022, EF Core, T-SQL, Telerik Reports, Azure DevOps, Azure

Senior .NET Workflow Foundation Engineer | Assurant - Atlanta, GA (Remote)

Feb 2020 - Jul 2020

- Converted SSIS packages and stored procedures into WorkflowCore workflows, enabling business users to compose discrete logic without ETL expertise.
- Led policy intake automation with dependency injection and comprehensive XUnit/WorkflowCore test coverage, coordinating with business stakeholders on a COVID-compressed timeline.
- Integrated Azure Service Bus messaging for workflow initiation and EF Core for workflow data access.

  Technologies: .NET Core, WorkflowCore, EF Core, Azure Service Bus, XUnit / Moq

Lead .NET Integration Engineer | Clearwave Corporation - Atlanta, GA

Aug 2019 - Dec 2019

- Integrated third-party Practice Management and Electronic Health Record APIs using FHIR and HL7 healthcare data standards with PII-safe data handling.
- Delivered UI enhancements for Patient, Practice, and Integration Consultant views.
- Employed multiple data access methodologies (ADO.NET, NHibernate, EF6 Code First) across Clearwave databases, manipulating SQL Server XML and JSON via native T-SQL functions.

  Technologies: FHIR / HL7, C# / .NET, SQL Server 2017, Entity Framework, NHibernate

Senior .NET / SQL Server Developer | Turner Broadcasting (Audience Monetization Services) - Atlanta, GA

Jan 2019 - Jul 2019

- Built an Azure SQL performance-monitoring framework adopted by 5 teams across departments for data-driven decision-making (cross-team, org-wide adoption).
- Designed a component recording database commands asynchronously to Azure with replay capability, letting developers and DBAs find performance issues and test alternative indexing; improved database efficiency 30%.
- Fixed timeout (calls running 30+ minutes) and concurrency issues in ad-sales scheduling, working seamlessly with code over fourteen years old.
- Architected and deployed features using Azure Virtual Networks and Machines, Azure Storage (Blobs and Queues), and Azure SQL.

  Technologies: Azure SQL, C#, SQL Server 2016, WCF, Azure Storage

Lead Umbraco CMS .NET Developer | ExamWorks, Inc. - Atlanta, GA (Hybrid)

Oct 2017 - Jan 2019

- Tasked by the Chief Communication and Research Officer to integrate 25+ North American brands and their vendors onto a unified Umbraco CMS spanning three data centers.
- Led web development for Independent Medical Examination, Peer Review, and Medicare Compliance businesses across the U.S. and Canada.
- Architected a testable framework (Moq and NUnit) for internally created CMS components, and migrated merger-acquired websites onto consolidated SBU instances with asynchronous MVC controllers.
- Converted all pages to HTML5 with Razor syntax and CSS3/Bootstrap 4 styling; managed vendor relationships for third-party CMS software.

  Technologies: Umbraco CMS, MVC 5, SQL Server 2017, Bootstrap 4, Ninject / Moq

Lead .NET WPF Engineer | Conduent (2017 divestiture from Xerox) - Remote

Jun 2013 - Sep 2017

- Lifted team productivity 23% by mentoring mid-level developers through Gang of Four design pattern sessions and best-practice coaching; modernized legacy systems.
- Composed internal standards via EIVS (Error Injecting Vector System), a test platform simulating both happy-path and exception scenarios against the Siebel host application; client apps needed zero architectural changes to use it.
- Presented design and architecture options to executive management spanning Angular 2/4, WebAPI2, MVC, C#, SQL Server, and EF6 code-first.
- Led solutions for Transportation, Healthcare, Health & Human Services, and Food Services jurisdictions, including a screen-scraping tool automating browser and mainframe tasks for call center agents.
- Worked remotely with a global workforce solving challenging operational issues across the division.

  Technologies: WPF / MVVM, Angular 2, TypeScript, Web API 2, EF6, WCF

Senior .NET WCF / SQL Server Engineer | Cigna Healthcare (HealthSpring) - Nashville, TN (Hybrid)

May 2012 - May 2013

- Redesigned the Medicare billing form and a cross-team billing workflow, saving 40% in costs stemming from inaccurate submissions and delayed payments.
- Spearheaded a 'lift and shift' methodology to future-proof applications and port business rules between systems, reducing maintenance costs 20%.

- Developed data-queuing microservices decoupling business needs from active technologies.
- Led proof-of-concept sessions introducing new technologies to mitigate merger and growth issues.

  Technologies: C#, WCF, MVC 3, SQL Server 2008 R2, MSMQ

Senior .NET Software Engineer | Sagepath, Inc. - Atlanta, GA

Aug 2011 - Mar 2012

- Architected a normalized alternative to the existing entity-attribute-pair backend for a major auto parts distributor.
- Enabled store owners to manage their own content (promotions, locations, store hours) on a site seeing 1.5MM page views per month and $1.2MM in online-generated revenue.
- Built a flexible promotional display component supporting national, local ad council, or owner-defined campaigns.

  Technologies: C# / Web Forms, SQL Server 2005, WCF, MSMQ

Senior .NET / MVC Developer | ADP - Alpharetta, GA

Feb 2011 - Aug 2011

- Architected and implemented an application converting client custom-report requests directly into fulfillment requests, reducing manual associate workload.
- Cut development and deployment costs by enabling two departments with similar business needs to share a common codebase, secured with client certificates.

  Technologies: C# / Web Forms, SQL Server 2005, WCF

Co-Founder / .NET Software Architect | Chasing Savings - Cumming, GA

Jul 2009 - Feb 2012

- Co-founded a SaaS platform giving newspapers the tools to compete in the new media world (early Azure, via Microsoft BizSpark).
- Led architecture and development end to end: business strategy, technical presales, client presentations, and full-stack implementation on ASP.NET MVC, SQL Azure, and Windows Azure Blobs.

  Technologies: ASP.NET MVC, SQL Azure, Azure Blobs, Business Strategy

Developer / Architect | Brainstorm Group, LLC

Sep 2009 - Mar 2011

- Architected an MVC application storing financial data, account information, and holding reports with internal voting and results display.
- Designed and maintained a marketing promotions site where consumers search for new campaign items, an early adoption of SQL Azure and Windows Azure Blob storage.

  Technologies: MVC 1/2, SQL Azure, GDI+, NUnit

Senior .NET Software Consultant | RDA - Alpharetta, GA

May 2006 - Aug 2009

- Traveled to client sites implementing Microsoft .NET and SharePoint (MOSS 2007) solutions.
- Built proof-of-concept solutions for Electronic Content Management and Digital Rights Management, helping define an architecture competitive with Interwoven.
- Gathered requirements and developed pilot applications, creating custom SharePoint field types and site templates extensible to later rollout phases.

  Technologies: SharePoint / MOSS 2007, C#, SQL Server 2005/2008, Technical Presales

Senior / Lead Developer | Scientific Games - Alpharetta, GA / Pueblo, CO

Jan 2005 - May 2006

- Owned the loading and handling of scratch-off (instant) tickets for the Colorado State Lottery, including a desktop UI for loading new tickets and games.
- Designed and implemented reporting across the lottery backend (inventory control, vendor purchases, player profiles), improving auditing efficiency 25%.
- Handled instant-product manifest receiving and failure processing via SOAP web services and T-SQL; mentored new hires on best practices.

  Technologies: C# / WinForms, SOAP Web Services, T-SQL, Mentoring

Lead Developer | NationsBuilders Insurance Services - Alpharetta, GA

Sep 2004 - Jan 2005

- Created an insurance clearinghouse application on SharePoint Portal Server and ASP.NET, replacing an Excel-and-Windows-app workflow with aggregated underwriter data entry.
- Built proof-of-concepts with OLAP cubes identifying undervalued segments, increasing revenue 15%; analyzed month-over-month and quarterly trends with Analysis Services.
- Led design of the Underwriter's Assistant application, coordinating best practices with vendors as specified by upper management and the Board of Directors.

  Technologies: ASP.NET, SSAS / OLAP, SharePoint Portal, SQL Server 2000

.NET Developer (Contract) | Scout Applications, Inc.

Jul 2004 - Aug 2004

- Created SQL Reporting Services reports for name tags and address labels, plus CMS modules displaying CRM events and announcements (CRM systems).
- Built a step-by-step wizard for loading data into the CRM application on DotNetNuke.

  Technologies: SQL Reporting Services, DotNetNuke, C#

.NET Developer (Contract) | Cox Communications - Atlanta, GA

Oct 2003 - Jun 2004

- Developed an e-commerce component letting customers order and upgrade services, with Commerce Server managing products, options, and checkout baskets.
- Used web services for catalog imports, payment services, bill reminders, and order fulfillment across Commerce Server 2002 and BizTalk Server 2002.
- Delivered trend analysis and ad-hoc reporting to business sponsors via SQL Reporting Services.

  Technologies: Commerce Server, BizTalk, C#, MSMQ

Microsoft .NET Developer (Contract) | Intellinet Corporation

Aug 2003 - Oct 2003

- Modeled an extensible framework architecture segregating commonly used items for reuse.
- Created T-SQL procedures storing XML configuration centrally so multiple web farm machines shared data without special file permissions.
- Built filterable data grids and role-aware server controls for listing and editing.

  Technologies: C#, T-SQL, Web Farm Architecture

CRM Software Configuration Developer | CAS Americas (Computer Anwendungs-und Systemberatung AG)

Sep 2001 - Aug 2003

- Developed web-based XML and ASP applications for Fortune 500 clients to reduce over-spending and manage risk in trade promotions.
- Created nightly SQL Server 2000 processes following client business rules through a proprietary COM architecture.
- Reduced operational downtime and increased data reliability; administered IIS, SQL Server, and source control.
- Helped develop test-system deployment policies, decreasing risk on every project.

  Technologies: VB6 / ASP, SQL Server 2000, COM, MSMQ

Software Engineer (Contract) | HOP Consulting, LLC

Mar 2001 - Aug 2001

- Redesigned a client/server estimator application from Visual Basic to VB.NET (VB-to-VB.NET migration), adding multi-threaded processing that reduced overall processing time and improved load distribution.
- Created in-house .NET components documenting user actions and failures during beta testing, cutting debugging time and expense.

  Technologies: VB.NET, Multi-threading, SQL Server 2000

Software Developer | Braincandi Solutions

1997 - Mar 2001

- First professional software role, beginning the transition from telecommunications into full-time development on the Microsoft stack.

  Technologies: VB, ASP, SQL Server

United States Marine Corps | 2841 - Ground Radio Repairer / Ground Electronics Transmission Systems Maintainer

1991 - 1995

- Served four years on active duty; the discipline and leadership foundation for everything that followed.

TECHNICAL SKILLS

Cloud & Infrastructure: Azure Container Apps, ACR, Azure Functions, Azure SQL, Key Vault, Managed Identity (SAMI)
Architecture & Resilience: SOLID Principles, Event-Driven Architecture, CQRS/Saga/Event Sourcing, Circuit Breaker
DevOps & IaC: Azure DevOps (Repos & Pipelines), Bicep/ARM, CI/CD, Workload Identity Federation, Docker, PowerShell
Languages & Frameworks: C#, .NET Core, ASP.NET Core, TypeScript, Angular, OAuth2/JWT, REST APIs, EF Core
Compliance, Testing & AI Tooling: HITRUST/SOC 2, NUnit, NBomber, Claude Code, GitHub Copilot

Years of experience by skill:

Object Oriented Programming	**24 yrs**	REST	**13 yrs**
Relational Databases	**24 yrs**	SOLID Principles	**15 yrs**
JavaScript	**25 yrs**	MVC / MVVM	**10 yrs**
Serialization (XML, SOAP, JSON)	**25 yrs**	Unit Testing (NUnit, MSTest, XUnit, Moq)	**11 yrs**
C#	**22 yrs**	Azure DevOps	**7 yrs**
T-SQL (SQL Server 2000 to Azure SQL)	**21 yrs**	Git	**7 yrs**
.NET Framework 1.1 to .NET Core	**22 yrs**	Agile / Scrum	**20 yrs**
HTML5 / CSS3	**13 yrs**	Visual Studio 2002 to present	**24 yrs**
WCF	**14 yrs**	SQL Server Service Broker	**3 yrs**
ASP.NET / MVC	**12 yrs**	FHIR / HL7	**5 yrs**
WPF	**4 yrs**	HITRUST / SOC2	**3 yrs**
WebAPI	**7 yrs**	ETL / SSIS / Data Factory	**18 yrs**
AngularJS to Angular 14	**7 yrs**	Entity Framework / EF Core	**13 yrs**
TypeScript	**7 yrs**	Umbraco CMS	**3 yrs**
Azure App Services & Cloud	**11 yrs**	Azure Event Hub	**7 yrs**
Azure SQL	**17 yrs**	Multi-Tenant SaaS	**12 yrs**
Azure Functions	**6 yrs**	Claude Code	**2 yrs**
Docker	**5 yrs**	GitHub Copilot	**2 yrs**

EDUCATION & CERTIFICATIONS

Microsoft Certified: Azure Administrator Associate (AZ-104)
B.S., Telecommunications Management - DeVry Institute of Technology, Alpharetta, GA (3.8 GPA). Courses covered project management, voice & data networks, infrastructure management, telecommunications technology, and software engineering.
United States Marine Corps (1991-1995) - 2841, Ground Radio Repairer