

Corey Crooks

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SUMMARY

Senior Software Engineer and Technical Lead with 12+ years designing and delivering distributed systems across healthcare, fintech, industrial, and aerospace platforms. Deep hands-on experience with C#/.NET, REST and GraphQL API design, SQL Server and NoSQL data stores, and cloud delivery on Azure and AWS. Track record of owning architecture and technical direction on legacy modernization efforts, moving monolithic systems toward service-based and event-driven designs without disrupting production. Comfortable across backend and frontend, CI/CD pipeline design, security and observability improvements, and mentoring engineers while collaborating across product and platform teams.

CORE SKILLS

Architecture: service-based systems, event-driven design, legacy modernization, service boundaries | Languages: C#, Java, Python, JavaScript/TypeScript | Frameworks: .NET Core, .NET Framework, Android SDK | APIs: REST, GraphQL, SOAP, FHIR | Databases: SQL Server, PostgreSQL, MongoDB | Cloud/DevOps: Azure, AWS, Azure DevOps, CI/CD, Git | Frontend: React, Angular | Observability/Quality: New Relic, SonarQube, static analysis, unit testing | Security: SHA-256, Delinea Secret Server, secrets management

PROFESSIONAL EXPERIENCE

Hanover Insurance | Digital Delivery Services

Application Engineer | 2026 - Present

- Works across enterprise application systems, production workflows, and integrations supporting TAP Sales and IVANS quote processing.
- Builds and maintains backend quote processing services using Java and Jakarta, deployed on Tomcat.
- Investigates and resolves production issues across SOAP-based services, using SOAP UI for endpoint testing and validation.
- Improves existing enterprise systems while growing toward broader architecture responsibilities.

UPMC | Pittsburgh, PA

Senior Software Engineer | Jan 2014 - 2026

- Owned architecture and technical direction for a mission-critical legacy claims and document platform, preserving embedded business logic and downstream partner integrations while leading modernization.
- Moved the platform toward cleaner service-based and event-driven components without disrupting production, often as the primary developer responsible for the modernization effort.
- Engineered solutions supporting over 200,000 weekly EOB mail pieces, including validation, transformation, metadata extraction, and downstream routing.
- Designed and delivered REST APIs and internal services in C#, .NET Framework, and .NET Core, deployed to Azure App Services and Azure Functions with Azure DevOps CI/CD pipelines.
- Built an SHA-256 encryption utility packaged as an internal NuGet package to standardize secure credential handling across teams.
- Implemented New Relic monitoring and integrated Delinea Secret Server for automated credential rotation, improving security posture and operational visibility across production systems.

Independent Consulting | Remote

Senior Software Engineer / Systems Architect (Contract) | 2019 - 2025

Selected clients: Robert Bosch LLC, H&R Block, Net Health, Pratt & Whitney

- Architected and delivered a cloud-based virtual Central Receiving Station for Robert Bosch, owning solution design across backend services, APIs, and cloud integrations through a demo-ready implementation.
- Designed and delivered API-driven, service-based components using REST and GraphQL for enterprise platforms, focusing on service boundaries and scalable client interactions.
- Built FHIR-based healthcare interoperability integrations and partner onboarding workflows for Net Health, covering ADT events, medications, and regulated data exchange.

- Upgraded H&R Block's internal e-file Ops Tool through five major Angular versions while delivering production features and support inside an Agile delivery model.
- Owned integration stability and error handling across downstream systems to reduce production risk, and supported rapid issue resolution alongside planned feature work.
- Built a Python and JavaScript/React/TypeScript documentation dashboard for Pratt & Whitney, centralizing manual aerospace reporting workflows.

ExpertChoice | Arlington, VA

Senior Software Engineer & Technical Lead (Contract) | Apr 2019 - Dec 2022

- Led architecture and implementation for the redesign and modernization of comparison.expertchoice.com, mentoring a team of four engineers.
- Designed and delivered REST APIs processing high volumes of decision-making and risk assessment data using .NET Core and SQL Server.
- Migrated development infrastructure from Mercurial, Continuum CI, and FinalBuilder into Azure DevOps, establishing source control, build pipelines, and release structure.
- Integrated SonarQube and static analysis into CI/CD to raise code quality and security hygiene, and deployed workloads across Azure and AWS in FedRAMP-aware environments.

Indeed | New York, NY

Software Engineer (Contract) | Nov 2019 - Jan 2020

- Built a .NET-based coding assessment platform used to evaluate software engineering candidates.
- Added automated testing and performance monitoring to improve platform stability.

GeistHoldings | Indianapolis, IN

Software Engineer (Contract) | Jul 2019 - Nov 2019

- Migrated financial datasets into SQL Server and built C# analytics workflows with REST APIs connecting reporting dashboards.

KIT Solutions | Pittsburgh, PA

Database Engineer | Nov 2013 - Feb 2014

- Built C# compliance workflow automation and optimized SQL stored procedures to improve execution time and system responsiveness.

GITHUB PROJECTS

SpireVault | github.com/c3rooks/SpireVault | spirevault.app

- Built and launched an open-source companion platform used by 69 users globally, combining native SwiftUI clients, TypeScript Cloudflare Workers/KV, Steam OpenID, local run parsing, and cross-device synchronization.

Ascension Companion | github.com/c3rooks/Ascension-Companion

- Published a fully native iOS application to the App Store using SwiftUI, StoreKit 2, Vision OCR, MVVM, UserDefaults persistence, and WidgetKit.

Kalshi OpenClaw Bot | github.com/c3rooks/Kalshi-OpenClaw-Bot

- Built a production-oriented TypeScript/Node.js system with SQLite, an Express dashboard and JSON API, hard risk and edge gates, Vitest/replay tooling, and OpenClaw Telegram controls.

ENTREPRENEURIAL EXPERIENCE

StringHands LLC | Remote

Founder, Product Builder | May 2025 - Present

- Took the HygroMount product from concept through prototype, manufacturing coordination, and Amazon launch, maintaining ongoing operations.
- Achieved a 4.7-star rating across 28 reviews through iterative product refinement based on customer feedback.

EDUCATION & CERTIFICATIONS

B.S. Computer Science, University of Pittsburgh | 2009 - 2014

A.S. Applied Science, Community College of Allegheny County | 2006 - 2009

SAFe Agile Certification | 2022