

Devin Houde

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SUMMARY

Principal Engineer with 13+ years of experience driving technical strategy and architecting cloud-native platforms at enterprise scale. Expert in Azure, Kubernetes, DevOps, microservices architecture, CI/CD automation, Infrastructure as Code, and AI-assisted development. Proven track record of modernizing engineering practices, establishing platform standards, and enabling teams to deliver secure, resilient systems at scale. Leads by setting technical vision, defining architectural standards, and enabling cross-functional teams to solve complex problems independently. Outside of work, I tackle complex problems through rock climbing, snowboarding, 3D printing, and LEGO building, activities that sharpen problem-solving, iterative design, and systems-thinking skills.

EXPERIENCE

Principal Engineer, Platform & Product Engineering

Ensemble Health Partners | Remote

April 2022 - Oct 2025

- Provided architectural leadership and coordinated execution across a 30+ engineer organization delivering real-time event processing, reliability improvements, shared component platforms, and a full application platform redesign.
- Shaped and operationalized the enterprise technical strategy for GitHub Copilot adoption, enabling teams to safely and consistently apply AI-assisted development to modernize engineering workflows.
- Led the design and technical direction of a voice-based AI platform integrated with enterprise telephony systems, enabling automated support interactions and reducing customer service demand by 30 percent across the organization.
- Introduced and institutionalized Infrastructure as Code as a core platform standard, eliminating manual production changes and improving deployment consistency, traceability, and operational resilience across teams.
- Established performance and reliability expectations and guided architectural improvements that reduced platform response times from tens of seconds to sub-second levels, setting a new scalability baseline.
- Implemented and evolved security tooling, workflows, and response practices that reduced time to resolution and proactively mitigated production vulnerabilities across the platform.
- Aligned and standardized Agile delivery practices across engineering teams, synchronizing sprint cadences and enabling a predictable, organization-wide two-week release cycle.
- Set the CI/CD platform direction and delivered a shared library of Azure DevOps pipelines, standardizing deployment workflows and accelerating developer productivity at scale.

Principal Engineer

Optum | Boston, MA & Remote

May 2019 - April 2022

- Drove cloud infrastructure optimization for a social determinants of health platform, reducing operational costs by over 50% while maintaining high availability and performance at scale.
- Defined and delivered an enterprise secrets-scanning capability monitoring 150,000+ internal repositories, materially improving security posture and reducing risk of credential exposure across the organization.
- Architected and launched a self-service eventing platform that enabled cross-team access to actionable system events, accelerating operational responsiveness and improving system observability across the organization.
- Led the architectural evolution of a core provisioning tool from a monolithic codebase to a modular, scalable architecture, improving long-term maintainability and deployment efficiency.
- Established Infrastructure as Code patterns and reusable Terraform modules as provisioning standards, improving environment consistency and reliability across production systems

Senior Software Engineer

Optum | Boston, MA

Feb. 2017 - May 2019

- Designed and implemented CI/CD pipelines for multiple provider applications and a social determinants of health platform, enabling daily deployment cycles and reducing release friction.

- Developed a centralized, configuration-based portal that empowered engineers to efficiently navigate and utilize a large organization's diverse set of internal tools and portals.
- Established a shared user analytics framework for internal applications, enabling cross-team collaboration and data-driven decision-making across multiple business units.
- Delivered a comprehensive toolkit leveraging open-source libraries to automate and standardize internal code repository management, increasing engineering productivity and consistency.
- Architected and deployed a reverse proxy solution to seamlessly map custom domains to internal documentation sites, streamlining access for thousands of users.

Senior Application Developer

Optum | Boston, MA & Hartford, CT

Feb. 2016 - Feb. 2017

- Introduced and led the implementation of diagnostic dashboards for real-time, intelligent monitoring across a portfolio of microservices—improving system reliability and reducing incident response times.
- Developed and evangelized diagnostic, debugging, logging, and security libraries adopted by multiple provider-facing teams, standardizing best practices and reducing duplicated effort.
- Leveraged AWS to architect and implement robust external routing solutions for high-traffic provider applications, enhancing scalability and availability.
- Designed and implemented a scalable, dynamic gateway for Kubernetes-hosted microservices, supporting seamless routing and high system resilience.
- Mentored and trained new engineering teams, equipping them with the skills and practices necessary to deliver high-quality applications on the provider platform.

Application Developer II

Optum | Waltham, MA & Hartford, CT

June 2014 - Feb. 2016

Technology Development Program Associate

Optum | Hartford, CT

June 2012 - June. 2014

SKILLS

Cloud & Infrastructure: Microsoft Azure, Amazon Web Services (AWS), Google Cloud Platform (GCP), Kubernetes, OpenShift, Docker, Terraform, Infrastructure as Code (IaC), Event-Based Architecture, Reverse Proxy Configuration, Service Bus, Event Grid, EventHub

DevOps, CI/CD & Automation: Azure DevOps, GitLab, Jenkins, Git, GitHub, SonarQube, Security & Compliance (Snyk, Wiz), GitHub Copilot, AI Pair Programming (Copilot, Claude, GPT), Automated Testing, Unit Testing, Integration Testing, CI/CD Quality Gates, Build & Package Management (Maven, Gradle, npm, NuGet), Bash

Monitoring & Observability: New Relic, Azure Monitor

Architecture & APIs: Microservice Architecture, Event-Driven Architecture, RESTful API Design, GraphQL, Scalable Systems Design

Programming Languages & Frameworks: C#, Java, Python, JavaScript, TypeScript, Groovy, .NET, Node.js

Frontend & Web: React, Angular, HTML, CSS

Databases: SQL, MySQL, CosmosDB, MongoDB, NoSQL

Data & Markup Languages: JSON, XML, YAML, Markdown

Documentation & Knowledge Sharing: Technical Documentation, API Documentation (Swagger/OpenAPI), Knowledge Sharing

Leadership & Strategy: Technical Leadership, Mentoring & Coaching, Cross-Functional Collaboration, Stakeholder Management, Strategic Planning

Security: Security Automation, Identity & Access Management (OAuth, SAML, OpenID), Threat Modeling, Regulatory Compliance (HIPAA, SOC2)

EDUCATION

Western New England University | Springfield, MA

Bachelor of Science in Computer Science