

Nathan Heskew

Building Internet Things

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Professional Summary

Technical leader and architect with extensive experience building distributed systems and web experiences that operate at a global scale. Proven track record of transforming complex technical challenges into elegant, secure, and accessible solutions that empower users and developers alike.

Led technical initiatives at Microsoft that make developer education more accessible to millions through modern web technologies, including Node.js, React, and real-time communication systems. Deep expertise in distributed architectures, frontend/backend integration, and secure payment systems. Particularly passionate about building technology that creates a positive global impact while maintaining high standards for security, accessibility, and performance.

Experienced in scaling teams and systems through multiple growth phases - from building products from 0 to 1 in startups to evolving enterprise platforms. Strong focus on creating resilient architectures using modern technologies that can adapt to changing requirements while maintaining performance at scale.

Professional Experience

Microsoft

Senior Software Engineer (2022 - 2025)

- Architected and led the development of learn.microsoft.com's new Node.js-based rendering layer serving 77M monthly active users and 200M pageviews, enabling seamless content delivery to millions of developers globally. This moves the platform from static HTML generation to SSR, allowing for greater flexibility, fine-tuning, and tighter integration of new pure SSR feature areas like integrated Q&A.
- Designed distributed build and release pipeline architecture that reduced deployment times while improving reliability
- Implemented multi-environment deployment strategy supporting development, staging, and production environments across global regions
- Built developer tooling and documentation that improved team velocity and reduced onboarding time for new engineers
- Led architectural improvements to the video processing pipeline, reducing transcoding time while maintaining quality
- Enhanced video delivery system supporting HLS/DASH formats, improving global content delivery performance, and improved test coverage in the transcoder pipeline

Senior Software Engineering Manager (2020 - 2022)

- Continued development of a new rendering layer for Microsoft's developer documentation platform, docs.microsoft.com (now learn.microsoft.com)

- Mentored intern who won an internal hackathon with server-side rendering proof-of-concept, which later influenced production architecture
- Established technical standards and review processes that improved system reliability and maintainability
- Collaborated with product and content teams to define technical strategy for documentation platform evolution
- Guided team's adoption of automated testing and continuous deployment practices

Senior Software Engineer (2019 - 2020)

- Initiated and led the development of a new rendering layer for Microsoft's developer documentation platform, docs.microsoft.com (now learn.microsoft.com)

SkewTech, LLC

Founder (2015 - 2023)

Independent consultancy specializing in distributed systems architecture and cloud-native transformations.

Epoch

Senior Software Engineer (2016 - 2018)

- Architected high-throughput payment processing services using Node.js microservices
- Implemented PCI-DSS compliant workflows with end-to-end encryption
- Built scalable infrastructure using AWS, Docker, and Kubernetes

NearForm

Software Architect (2015 - 2016)

- Led strategy to modernize monolithic Java system into Node.js microservices
- Designed incremental migration path that enabled gradual adoption
- Established patterns for legacy system evolution and integration

Joy the App

Senior Software Engineer (2015 - 2015)

- Built real-time synchronization between clients using WebSockets, ensuring seamless collaborative experiences across web and mobile platforms
- Developed scalable backend services with Firebase and Azure
- Contributed to Android app development and infrastructure

Tagboard

Senior Software Engineer (2013 - 2015)

- Built a real-time social data aggregation system using Node.js and MongoDB
- Implemented Redis caching strategies, optimizing performance and reducing API costs
- Implemented WebSocket connections for real-time social data updates, reducing latency and improving the user experience for live event displays.
- Early adoption of Hapi.js for reliable web services

Microsoft

Senior Software Development Engineer (2006 - 2012)

2011-2012: Led development of Azure developer portal and billing systems frontend, enabling self-service management for cloud service customers.

2009-2011: [Co-founded Orchard CMS project](#), architecting admin interface and UI composition engine that became foundation for enterprise content management platform.

2008-2009: Contributed to Channel9's user experience before leading development of [Oxite](#), the open-source CMS platform that powered Channel9 and MIX. Success of Oxite led to founding of the Orchard project.

2006-2008: Created custom JavaScript framework (Voodoo) for MSN properties, implementing performance optimizations for high-traffic web properties.

University of Washington Bothell

Web Application Developer (2000 - 2005)

- Architected and developed web applications using Perl, MySQL, and Yellow Dog Linux
- Managed web and database server administration for a rack of Mac servers
- Built and maintained critical university web infrastructure
- Implemented secure, scalable solutions for university web services

Technical Skills

Core Expertise: Distributed Systems Architecture, Web UX/Performance, API Design, Real-time Data Processing, Cloud Infrastructure (AWS, Azure), Container Orchestration, UX Engineering

Server Technologies: Node.js/TypeScript, C#/.NET, Java, Go, Redis, MongoDB, MySQL, Linux/Windows Server

Cloud & Security: AWS Services, Azure Platform, Payment Systems Security, OWASP ASVS, PCI-DSS, Zero Trust Architecture, Multi-environment Deployment, Threat Modeling

Frontend & UI Development: React/Next.js, WebSockets, Server-Side Rendering, Progressive Web Apps, Modern CSS/SCSS, Web Performance Optimization, Responsive Design, Cross-Browser Compatibility, Web Accessibility (a11y)

Leadership: Technical Strategy, Architecture Modernization, Team Mentorship, Platform Design