Blake Harms

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Professional Summary

Full-stack software engineer with 8+ years of experience at Emerson, specializing in high-performance C# simulations, modern web frameworks, and DevOps infrastructure. Led solo migration of large legacy desktop framework to Angular/TypeScript architecture. Proven ability to drive modernization initiatives, establish engineering best practices, and lead development teams through complex technical transformations.

Professional Experience

Senior Software Engineer

Emerson | April 2017 – Present

Framework Modernization and Web Migration

- Led 4-year solo effort to rebuild legacy C# WPF desktop framework as modern Angular/TypeScript web application with near-zero loss of functionality
- Led effort to refactor code in structured manner, resolving ~60% of technical debt and implementing unit-testing and domain-based structures
- Transitioned to team lead role overseeing framework modernization initiatives with expanded team support
- Architected core integration and design systems using Angular, TypeScript, and SASS/CSS3

DevOps and Development Infrastructure

- Implemented Docker-based containerized environment for standardized debugging and deployment workflows across development and production
- Executed complete SVN-to-Git migration while preserving full version history and restructuring monolithic repository into multiple domain-separated repositories; trained coworkers on Git workflows
- Established CI/CD automated build pipelines in Azure

Testing and Quality Practices

- Introduced automated testing framework and established testing practices across codebase, despite organizational push-back
- Led modernization of development practices with Git repositories, pull-requests, and pair-programming workflows
- Developed scripts and prompts for safe Github Copilot usage transition; created best-practices documentation and trained team members on proper usage and appropriate applications

Engineering and Performance

- Developed C# high-performance mathematical engineering simulations for computationally intensive calculations and data processing
- Designed and iterated on WPF user interfaces through user research and implemented UX improvements that enhanced engineer workflows and productivity

Software Engineer

Wood | May 2012 – April 2017

Utility Designer

- Developed WPF/MVVM applications for internal use by engineers configuring Oil & Gas fluid dynamics simulations
- Built domain-specific tools that streamlined simulation setup and improved user efficiency

Skills

Languages: TypeScript, C#, JavaScript, SQL, PowerShell, Bash/Zsh

Frontend: Angular (expert, 4+ years), React, SASS, CSS3, WPF, HTML5

Testing & QA: Jest, Vitest, Playwright, XUnit, NSubstitute

Backend: C# (high-performance simulations), Node.js

DevOps & Tools: Docker, Git, SVN, CI/CD, Azure DevOps, GitHub, Linux administration

Practices: Component architecture, Automated testing, UX design, Agile development, Technical leadership

AI & Context Engineering: Proficient with Claude, Copilot, Cursor, KiloCode; experienced with prompt engineering, context optimization, and AI-assisted development workflows

Education

Bachelor of Science in Computer Science, Minor in Mathematics
University of Houston | 2012

Additional Information

- Manage Home-Assistant instance with automations for 300+ entities across two mesh networks
- Host privacy-focused self-hosted services on Proxmox and UNRAID infrastructure
- Active in exploring emerging AI/ML tools and modern development methodologies