

# Henry A. Riley III

[LinkedIn](#) · [Portfolio](#) · [GitHub](#) · [Email](#) · Bentonville, AR

## Senior Full-Stack Software Engineer / Front-End Architect

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Senior full-stack software engineer with 20+ years of experience building scalable web applications using React, Next.js, Angular, C#.NET, and Node.js. Proven track record architecting front-end frameworks, leading modernization initiatives, and mentoring engineering teams. Currently building with Next.js, TypeScript, and AI-powered workflows. Please see my portfolio site link above, as it is much more detailed than this resume - especially the experience and skills pages.

## Technical Skills

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- **Front-End:** React, Next.js, Angular (2–18), Vue.js, Nuxt, TypeScript, JavaScript, RxJS, NGRX, Redux (state management), Tailwind, HTML5, CSS3, SASS, Highcharts, GraphQL
- **Back-End:** C#, ASP.NET Core, Web API, Entity Framework Core, Node.js, Express, Nuxt, RabbitMQ
- **Test Automation:** Jest, Jasmine, Playwright, NUnit
- **DevOps & Tools:** Azure, Azure Pipelines, Docker, Git, GitLab, Webpack, Figma, VS Code, OpenTelemetry, n8n
- **AI Skills & Tools:** Prompt Engineering, Context Engineering, Claude Code, Copilot, ChatGPT, Ollama
- **Databases:** PostgreSQL, Supabase, MSSQL, Redis, MongoDB
- **Patterns & Processes:** REST, Microservices, CI/CD (Continuous Integration / Continuous Deployment), Cloud-native, MVVM, MVC, Agile, SCRUM, Kanban, Ideation & Discovery, User Journey Development, Feature Definition & Scoping

## Recent Projects

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### InstruFax — Musical Instrument History Tracker (June 2025 – August 2025)

- Designed and developed a full-stack web application for tracking musical instruments by serial number, including ownership history, repair records, and store profiles, using Next.js 15, React 19, TypeScript, Supabase, TailwindCSS 4, and daisyUI 5.
- Adopted a mobile-first design philosophy. Created a comprehensive Figma design system and interactive prototype with semantic color tokens, typography scale, 20+ reusable components, and responsive mobile/web screen mockups.
- Implemented role-based access control (RBAC), Auth0 authentication (OAuth 2.0 / OIDC), and security layers including Arcjet bot protection and Google ReCaptcha.
- Architected community features including instrument ownership transfer workflows, store registration with admin approval, and user-to-user messaging.
- View the project showcase at <https://shea-riley.com/projects/instrufax>

### FarmHub — Farmers Market Directory (March 2025 – April 2025)

- Built a production directory web application using Next.js, Node.js, TypeScript, Tailwind, daisyUI, and Supabase with interactive maps powered by Leaflet.
- Designed and implemented AI-powered data filtering workflows using n8n workflow automation and locally hosted LLMs via Ollama, with tuned system prompts to minimize false positives/negatives.
- Integrated Google Maps Places API for data acquisition and built Node.js scripts to orchestrate automated data pipelines.
- View the website at <https://farm-hub.net>

## Professional Experience

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### **Independent Senior Software Engineer / Consultant** *Remote | Nov 2023 – Present*

- Designed and developed InstruFax, a community-driven instrument tracking platform using Next.js, Supabase, Auth0. Implemented a mobile-first Figma design system and responsive UI for a consulting client.
- Architected and shipped FarmHub (farm-hub.net), a production directory platform utilizing Next.js 15, TypeScript, Tailwind CSS, and Supabase to deliver a responsive, high-performance user experience.
- Implemented rigorous CI/CD workflows and automated end-to-end testing using Playwright to ensure production reliability and prevent regressions.
- Completed advanced professional development certifications in React ecosystem architectures to align 20 years of architectural experience with modern JavaScript standards.

### **Atlas Technology Group (Advantage Solutions) | Bentonville, AR**

#### **Lead Software Engineer & Front-End Architect** (Nov 2016 - Nov 2023)

- Led the modernization of a full-stack retail analytics platform using Angular (7–13), RxJS, C#, and ASP.NET Core Web API, improving performance, reducing technical debt, and enhancing developer efficiency; simultaneously acting as architect, lead engineer, and product owner.
- Designed and implemented a reusable front-end framework and component library using Angular and Angular Material, accelerating development and enabling legacy-to-modern migration of existing applications.
- Developed dynamic data visualization dashboards (charts, heatmaps, gauges) using Highcharts and Angular, enabling data-driven decision-making for retail analytics.
- Implemented multi-layer caching strategy using Redis (server-side) and IndexedDB (client-side) to optimize dashboard data delivery speeds.
- Integrated an in-house ETL framework with a package dependency system to ensure reliable daily data pipelines for reporting dashboards.
- Created a web-based, WYSIWYG dashboard designer for users to customize visualizations and dashboard layouts, with C# and ASP.NET Core Web API powering the backend data layer. Responsive layout achieved using custom CSS breakpoints and Gridster.
- Built a containerized development environment using Docker on WSL2 to create a consistent development environment and reduce onboarding time for new hires.

- Developed unit testing framework and test harnesses to reduce boilerplate code needed to effectively test front-end components; and established/documented unit testing standards, conventions, and best practices. Tests were written using Jasmine and the Angular Unit Testing libraries and were run as part of the CI/CD pipeline in Azure.
- Provided technical leadership, mentoring, and architectural guidance across teams.
- Established, documented, and enforced coding conventions and architectural guidelines for all front-end development across the organization; to encourage consistency, readability, and efficiency of the front-end codebase.
- Assisted project management and product owners in development, estimation, and pruning of requirements and backlogs.
- Participated in screening and interviewing processes for hiring new developers for the engineering team.

## **The Learning Institute | Hot Springs, AR**

### **Director of Software Development & Lead Software Engineer** (July 2012 - July 2016)

- Developed an online testing platform using ASP.NET RESTful Web APIs and Knockout.js, supporting 5M+ tests across 140 districts.
- Created a data-driven CMS using ASP.NET Web API and Knockout.js for managing educational standards and assessment content, with rich text editing powered by ckEditor.
- Built multi-layered role-based authentication and authorization systems using ASP.NET Identity.
- Designed scalable reporting tools leveraging OData queries and ASP.NET Web APIs backed by LINQ-to-Entities.
- Designed and implemented web-based access control portal; facilitating the provisioning of access to various applications and features.
- Implemented a rule-based assessment system supporting multiple formats, including PDF and online testing. Leveraged Razor templating and CSS3 to dynamically generate PDF versions of assessment test content, enhancing flexibility and automation in test delivery.
- Established source control branching and merging policies, using Microsoft TFS.
- Implemented CI/CD build and deployment pipelines using JetBrains TeamCity.

## **Cities In Touch | Hot Springs, AR**

### **CTO & Chief Software Engineer** (July 2000 - Aug 2011)

- Co-founded and led technology for a startup providing interactive touch-screen advertising, digital signage, and PCI-compliant financial service kiosks.
- Designed and developed the full software stack, including secure financial transaction processing, POS hardware integration, and a centralized remote management system for a distributed kiosk network.

## **Key Achievements**

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- Originated a "skunk-works" front-end framework project on own initiative that was adopted as the organization-wide standard at Atlas Technology Group.
- AdHoc Basic report designer mode resulted in increased client adoption and new sales.

- Online testing platform collected 6+ million test submissions across 140+ school districts before departure from TLI.

## **Education & Certifications**

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Self-taught with 20+ years of professional software engineering experience.

- Udemy: React — The Complete Guide (2024)
- Udemy: React & TypeScript — The Practical Guide (2024)
- Udemy: React Native — The Practical Guide (2024)
- Udemy: Figma UI UX Design Essentials (2024)

## **Hobbies & Interests**

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3D printing, CAD design (Fusion 360), electronics & IoT prototyping, CNC & metal fabrication.