Miles Nichols, Software Engineer

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Education

Master's Degree in Artificial Intelligence - Iowa State University | Graduation: Fall 2027
Bachelor's Degree in Software Engineering - Iowa State University | **GPA: 3.6** - Dean's List | Graduation: Fall 2026

Professional Experience

Incoming Automation Engineer Intern - American Equity   **Summer 2026**
- Selected for a competitive 10-week program to design, code, and execute test automation scripts within the Automation Regression suite.
- Will utilize Object-Oriented Programming and QA tools (qTest, JIRA) to debug automation scripts and estimate testing efforts in collaboration with the Automation Team.

Founder and CEO - Hook Point Solutions LLC   **Summer 2025 -Present**
- Established an independent software consultancy, successfully delivering a custom full-stack solution to a client by managing the complete lifecycle from requirements gathering to delivery.
- Designed a secure, full-stack Migraine Diary web app from concept to deployment with a SvelteKit/TypeScript front-end and Spring Boot/PostgreSQL back-end.
- Secured sensitive health data by implementing a RBAC system for distinct user permissions.
- Built dynamic reporting features with interactive data visualizations to help users identify personal trends and correlations.

Systems Automation Development - Innovative Systems   **Summer 2025**
- Earned 8.1 IU Credential at Inductive University, demonstrating expertise in industrial automation alongside completing various elective courses.
- Spearheaded the end-to-end migration of a crucial database from MS SQL Server to PostgreSQL, converting transaction groups, report queries, and programmable functions.
- Engineered the integration of real-time industrial data systems for Tyson Foods by managing transaction groups, reports, and vision modules, enhancing operational visibility.

Technical Projects

Full-Stack Android Applications   **Fall 2024 - Spring 2025**
- Developed two full-stack Android apps using Java, XML, MySQL, and Spring Boot.
- Implemented real-time data sync via WebSockets and validated RESTful APIs using Postman to ensure reliable communication between the Android client and Spring Boot backend.
- Automated development by integrating CI/CD pipelines, improving testing and deployment.

Autonomous Robot Navigation   **Fall 2024**
- Led a 6-person team in developing a microcontroller-based robot for autonomous navigation by assigning roles, planning meetings, and leading communication.
- Architected the integration of sensors (ADC, Ping, Servo) and a Python GUI, developing control algorithms for precise movement.

Skills and certifications

Programming Languages: Java, C, Python, JavaScript, TypeScript, SQL, ARM, MATLAB
Tools: Git, Ignition SCADA, PowerShell/Bash, CI/CDs, Spring Boot, JUNIT, Latex, Office
Web/App Dev: Android Studio, HTML/CSS, XML, JSON, Postman, React, SvelteKit
DBMS: MySQL, PostgreSQL, MS SQL Server
Embedded Systems: Verilog, Logic Circuits, Microcontrollers, Datasheet Analysis
Certifications: Inductive Automation 8.1 IU Credential | MATLAB Onramp | Image Processing Onramp | Machine Learning Onramp | Computer Vision Onramp