SH

SEAN HATHAWAY

Software Architect | Creative Technologist | R&D Engineering Lead

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PROFESSIONAL SUMMARY

Enterprise Software Architect and Engineering Leader with 15+ years of experience operating at the intersection of rigorous system design and experimental innovation. I possess a unique dual competency: modernizing high-stakes systems for regulated industries (Healthcare/FinTech) while simultaneously architecting complex, interactive hardware/software ecosystems for the creative sector.

I am a systems thinker who bridges software delivery and enterprise strategy through data-driven decisioning and AI-assisted governance. My background combines deep technical fluency (.NET, Azure, Graph DBs) with the R&D mindset required to design embedded robotics, sensor fusion networks, and experiential technology. I am seeking to leverage this hybrid background in "unicorn" roles that demand both architectural precision and creative ambition such as Experience Design, Experimental Advertising, or Forward-Thinking Architecture.

EXPERIENCE

PacificSource Health Plans | Springfield, OR
Software Architect | Enterprise Architecture Representative
01/2024 - Present

- Serve as the architectural lead for Web and Mobile Applications, ensuring delivery teams align with enterprise strategy, security governance, and modernization goals.
- Risk Reduction: Launched a Technical Debt Reduction Program using a graph-based risk model to map dependencies and measure blast radius, successfully reducing integration risk by approximately 30%.
- AI Innovation: Introduced AI-assisted code review agents to evaluate standards compliance and roadmap alignment, accelerating review cycles by approximately 25%.
- Governance: Authored and implemented Coding Standards and Architecture Roadmaps, raising engineering discipline. Designed a Front-End Design Pipeline linking Functional Specifications to Design Blueprints to improve audit readiness.
- Strategic Planning: Collaborate on the Enterprise Architecture Governance Board to align technology roadmaps with business and regulatory objectives.
- Environment: Azure DevOps, .NET / C#, Entity Framework, SQL Server, Graph Database, Domain-Driven Design.

Pink Noise Projects | Portland, OR
Director of Engineering
11/2021 - 11/2022

- Built engineering operations for a creative technology organization, overseeing multidisciplinary software and hardware projects.
- R&D Leadership: Directed prototype and feasibility testing for new product offerings, bridging the gap between creative concepts and technical execution.
- Process Automation: Created custom Salesforce data migration tools using Python and Node.js, significantly cutting downtime and licensing costs.
- Operations: Established engineering policies and configured collaboration tools (JIRA, Slack) to support agile workflows in a creative environment.

SHLaboratories | Portland, OR
Principal Consultant & Creative Technologist
01/2010 - Present

- Embedded Engineering: Architect and implement firmware for microcontrollers (Teensy, ESP32, Arduino) using robust state-machine patterns for user controls and safety interlocks.
- Systems Integration: Integrate multi-protocol communications (UART, SPI, I2C, MIDI) for real-time sensing and actuation in complex environments.
- Robotics & Motion Control: Design animatronics subsystems—including multi-DOF linkages—utilizing inverse kinematics to plan and coordinate

smooth, lifelike motion for interactive installations.

- Representative Projects: My Burning Pianist: A propane-powered robotic piano requiring custom control electronics and C/C++ firmware. - FireDance: An interactive installation utilizing Kinect depth capture and C++/Cinder for real-time visualization - Gaussian Jellyfish: Perlin/Gaussian-driven LED animations demonstrating complex algorithmic visual generation.
- An independent consultancy delivering architecture consulting, embedded systems design, and prototype development across art, education, and engineering sectors.

Symbeo (a CorVel Company) | Portland, OR
Senior Software Engineer
01/2005 - 04/2020

- Lead engineer for secure medical claims automation and adjudication systems in a highly regulated healthcare environment.
- Automation & ROI: Delivered over $6 million in savings over 10 years through the automation of repetitive workflows and process optimization.
- Framework Design: Architected a reusable service framework to standardize EDI, XML, and JSON processing, saving thousands of development hours over the platform's lifecycle.
- Reliability: Implemented service components to automate workflows, significantly reducing error rates in high-volume data processing.

EDUCATION

B.S. in General Sciences
Portland State University | Oregon

B.S. in Astrophysics (partial)
New Mexico Institute of Mining and Technology

A.A. in Commercial Pilot Certification
Mt. Hood Community College

SKILLS

- ASP.NET and .NET development
- Python and JavaScript coding
- JSON and XML data formats
- Entity Framework Core usage
- Azure DevOps practices
- Microsoft SQL Server administration
- Data modeling techniques
- Embedded systems programming (ARM/ESP32)
- Fusion 360 design modeling
- Mentoring and training programs
- Strategic planning initiatives
- Microservices architecture design (DDD)
- Technical support services
- Enterprise and software architecture strategies

- C, C#, and C++ programming
- SQL and T-SQL database management
- EDI integration solutions
- REST API design and management
- Software lifecycle management
- Graph database architecture
- ETL process implementation
- Sensor integration (I2C, SPI, UART)
- Effective communication skills
- Agile project management methodologies
- Risk assessment strategies
- Software development lifecycle expertise
- Technical leadership roles

COMMUNITY SERVICE

Sunnyside Environmental K-8
01/2022 - Present

- Role: Coding and Robotics Club Advisor
- Mentor students in coding and microcontroller design.

Portland Winter Lights Festival
01/2018 - Present

- Role: Volunteer / Artist
- Design interactive light/fire installations and mentor emerging creators.

AFRU Gallery
01/2010 - Present

- Role: Curator
- Curate annual digital art showcases for the Portland tech-art community.

WEBSITE, PORTFOLIO AND PROFILES

LinkedIn: www.linkedin.com/in/sean-hathaway
Creative Portfolio: www.shlaboratories.com

REFERENCES

References available upon request