Shawn Hoover

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Role

Technical leader with expertise in distributed systems, IoT monitoring, and instrument control. I partner with leadership to identify strategic engineering opportunities; design, implement, and operationalize technical solutions for business problems; empower teams through mentoring; and drive software delivery process improvement.

Professional Experience

Sunnova Energy, Houston TX (Remote)

Distinguished Software Engineer   April 2024 - Present

- Engineering leader supporting software delivery, operations, architecture modernization, and process improvement across the software organization.
- Steward review process for system design, technology selection, and process improvement. Established solution design templates facilitating data-driven problem solving.
- Standardized manual release processes to trunk-based development. Pilot reduced release candidate builds from days to minutes and reduced defect rates. Drove org-wide adoption by leading working sessions and building callable workflows.
- Led engineering effort to integrate an alternate solar design platform, improving speed and accuracy for sales teams and reducing cost. Worked with Product, QA, and business partners to plan deliverables, triage defects, and manage platform-wide rollout without disruption to dealer sales and installations.
- Support teams diagnosing critical production issues. Review postmortems in progress.
- Developed tooling supporting tax credit applications, enabling the business to complete applications 12x faster, competitively secure credits, and adapt to regulation changes.

Skills used: C#, Python, TypeScript, AWS (Lambda, ECS, RDS, SQS, S3), Salesforce, GitHub Actions, New Relic, DuckDB

SunPower Corporation, Richmond CA (Remote)

Sr. Principal Software Development Engineer   October 2022 - April 2024
Principal Software Development Engineer   October 2021 - October 2022
Staff Software Development Engineer   October 2019 - October 2021

- Led development of the energy time-series and alerting platform supporting homeowners, dealers, support staff, and fleet analytics. Saved $4M/year while improving system performance and data quality, adding features, and stabilizing the development roadmap.

- Designed for scalable end-to-end ingestion and sub-second response time. Maintained SLAs while migrating 7 million devices, launching new telemetry, growing customers 30% per year, and delivering additional incremental cost savings.

- Launched panel-level monitoring, delivering a new capability for SunPower monitoring that improved customer satisfaction and boosted app store ratings.

- Developed requirements and coordinated delivery with client application developers, Product, and QA. Designed APIs, internal messaging, and storage to support incremental migration for all customers and applications.
- Defined coding standards, mentored developers on developing and operating distributed systems, and reinforced practices by building developer tooling and designing release pipelines.
- Led incident response for production issues. Escalated complex third-party dependency issues and drove resolution with vendor support. Contributed to and reviewed post-mortems.

Skills used: Go, Java, node.js, Kafka (Streams, Connect, Consumer), Protobuf, InfluxDB, PostgreSQL, AWS serverless compute and storage (IoT Core, Kinesis, Lambda, DynamoDB, S3, SQS, API Gateway, CloudFormation, CloudWatch), Kubernetes (ArgoCD, Skaffold, Helm, AWS EKS), GitHub Actions, Jenkins, Datadog, OSIsoft PI

XIA LLC, Hayward CA (Remote)

Software Engineering Manager   August 2012 - September 2019
Senior Software Engineer   August 2009 - July 2012

- Led development of control applications for commercial x-ray spectrometers and alpha counting instruments. Responsible for all aspects of software functionality and performance, including SDKs, electronics control, configuration UI, data formats, online analysis of time-series data, release engineering, and software support.
- Collaborated with scientists to design data access and instrument control protocols. Supported sales team on technical inquiries. Supported OEM and commercial customers throughout application development lifecycles. Collaborated with firmware engineers to diagnose and resolve complex firmware/software issues.
- Co-authored a DOE-funded proposal for a high precision [network-based triggering system](). Designed software, developed work plans, and implemented using C and ZeroMQ on ARM Linux. Supported the PI authoring related presentations and DOE project reports.

Skills used: C#, cross-platform C, Reactive Extensions, Ragel, Ruby, Ruby FFI, binary file formats, Mercurial, Waf, Scons, MSBuild, SQLite, WPF, Pandoc, CloudFront, S3, driver signing, Windows Performance Analyzer, ZeroMQ, Wireshark, Windows Subsystem for Linux, Ubuntu

ClickIt Inc, Indianapolis IN

Software Developer   November 2008 - August 2009

- Developed camera displays integrating video and motion analytics streams.

Skills used: C#, native and .NET memory profilers, WPF, WCF, SQL Server

XIA LLC, Hayward CA

Software Engineer   January 2007 - November 2008

- Developed data acquisition and control systems for x-ray spectrometers and alpha counters.

Skills used: C#, C, WinForms, Ruby

Education

Stevens Institute of Technology, Hoboken NJ

Bachelor of Science, Computer Science