Kevin Liedtke

SOFTWARE ARCHITECT

Hands-On Software Engineer | UX & Systems Architecture

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SUMMARY

- 20+ years building production networking software from drivers and middleware to developer tools, workflow platforms, and user-facing applications.
- Defined UX architecture and experience strategy across APIs, GUIs, CLIs, and engineering workflows for network administrators and a 1,000+ engineer organization.
- Turned workflow friction, support pain points, and ambiguous requirements into practical software improvements grounded in real user needs.
- Brings full-lifecycle depth from early architecture and requirements through implementation, validation, production support, and end-of-life decisions.
- Mentored engineers across global teams and led cross-functional technical initiatives, translating engineering standards and workflow improvements into Director and VP-level outcomes.

CORE COMPETENCIES

Software Architecture | Technical Leadership | UX Architecture | Human Factors Engineering | Developer Experience
Workflow Optimization | Cross-Functional Influence | Mentorship | Lifecycle Governance

PROFESSIONAL EXPERIENCE

PRISM AQUATICS | Remote | Jan 2025 – Present

Early-stage startup building Sentry, a hardware and software product for aquarium water quality monitoring.

Software Architecture & UX Consultant | Jan 2025 – Present | Part-Time, Advisory

Advisory software architecture and UX partner for an early-stage hardware startup, shaping Sentry's system architecture and user experience from API design through on-device and web interfaces.

- Architected Sentry's API layer to decouple hardware, backend, and front-end interfaces, enabling a future front-end swap or headless deployment with minimal rework.
- Designed the on-device quick-glance interface and companion web dashboard for Sentry, enabling offsite monitoring and early detection across multiple water-quality data points.
- Shaped the technical narrative and visual hierarchy for VC pitch materials, directing attention to key data and reducing distraction, generating investor interest.
- Established naming conventions and a documentation plan for engineering and design continuity, with early contributions to logo and brand identity.

INTEL CORPORATION | Hillsboro, OR | 2005 – 2024

Global semiconductor company delivering networking hardware, software, and platform technologies.

Senior Systems Software Architect | Mar 2022 – Sep 2024 | Remote

UX architecture lead for Intel's wired Ethernet software portfolio, defining experience direction across customer-facing products, internal platforms, and metrics-driven workflow systems.

- Reduced driver triage time 30% and maintenance overhead 25% by designing a Python, C#, and SQL validation framework that embedded version and device metadata for traceability across production driver releases.
- Sought out across engineering teams to review architecture and code in C++, C#, JavaScript, ASP.NET, and Python, informing system design, maintainability, and cross-team development standards.
- Improved development efficiency 15% across four global engineering divisions by standardizing development workflows, requirements practices, and shared engineering processes.
- Cut requirements review cycles 50% and increased SLA compliance 45% by building automation pipelines, dashboards, and monitoring tools that surfaced workflow bottlenecks and enforced review timelines.
- Secured Director buy-in for process improvements by presenting at a global manager summit, doubling engineering participation in customer-impacting reviews and expanding cross-team quality ownership.
- Assembled and led a Principal Engineer-level UX task force, driving metrics-based UX and workflow initiatives that delivered Director and VP-level recommendations shaping product, process, and lifecycle priorities.

- Directed cross-functional projects while coaching engineers at all levels, from Principal Engineers to junior staff, on business communication, career progression, and navigating organizational dynamics.
- Used an internal LLM daily to construct complex SQL joins, surface edge cases in code, and summarize and clarify ambiguous requirements.

Senior Human Factors Engineer | Jun 2012 – Mar 2022

Owned UX architecture and design strategy for Intel's wired Ethernet software ecosystem, improving usability, task clarity, and interaction consistency across APIs, GUIs, CLIs, installation flows, and hardware-software behavior.

- Embedded UX architecture into hardware and software requirements from initial planning through release, establishing the interaction standards and design governance that shaped product behavior across the portfolio.
- Streamlined support operations, reducing tickets 20% and resolution time 15% by designing and implementing a centralized debugging and documentation hub used across multiple organizations.
- Reduced design iteration cycles 30 to 40% by prototyping workflows in Figma and C#, accelerating validation and feedback across engineering teams.
- Built and led a distributed UX-focused engineering team of 5, providing continuous design and usability coverage across global engineering organizations.
- Mentored engineers across Intel, including in India and Poland, in code design and career development, with mentees earning divisional awards and grade-level promotions.
- Influenced more than $50M in product retirement decisions by representing customer experience, supportability, and product usability on Intel's End-of-Life committee.
- Recognized for patent authoring depth and tapped to co-lead two innovation workshops that generated more than 40 engineer invention disclosures, approximately 15 of which advanced to patent.
- Enforced UI, branding, and accessibility standards across software interfaces, ensuring consistent, inclusive, and localized presentation across global product lines.

Network Software Engineer | Aug 2005 – Jun 2012

Delivered production networking software across the full wired Ethernet stack, from hardware interfaces and middleware to configuration tools and end-user applications.

- Owned mission-critical installers, middleware, hardware interfaces, and configuration tools across 40+ Intel Ethernet product releases, meeting stringent large-OEM requirements and contributing to over $1B in product revenue.
- Implemented Windows services, WMI integrations, and automation scripts using C++, C#, PowerShell, and Windows scripting frameworks.
- Built Windows configuration interfaces using C++, C#, WTL/ATL, and scripting frameworks.
- Managed a $250K localization budget and coordinated with globalization teams supporting worldwide product releases.

PERSONAL PROJECTS

- Built and maintain a MongoDB-backed job tracking web app using Next.js App Router, TypeScript, Mongoose, and Tailwind CSS, self-hosted on a home lab.
- Developed a self-hosted home lab agent for service monitoring, chat commands, and failure alerting.
- Designed and implemented a responsive portfolio site using Next.js, Tailwind CSS, and TypeScript.
- Engineered a MagicMirror module with a Node.js backend and web interface to extend smart display functionality.
- Created an open-source OctoPrint plugin integrating thermal sensors with 3D printer monitoring and control. (2021)
- Built a Python-based Discord bot that retrieves third-party financial data and responds through chat commands. (2023)

AWARDS & RECOGNITION

Intel Technical Lead | Awarded Apr 2020

Recognized by Intel’s Principal Engineer committee for technical leadership, innovation, strategy, and mentoring across UX architecture and Human Factors Engineering.

PATENTS

Granted

- US-12001826-B2, Device Firmware Update Techniques
- US-12254304-B2, Firmware Update Techniques
- US-12413539-B2, Switch-Managed Resource Allocation and Software Execution

Published

- US-20230124192-A1, Heating and Cooling Systems for Edge Data Centers
- US-20220114011-A1, Methods and Apparatus for Network Interface Device-Based Edge Computing
- US-20210041929-A1, Dynamic Network Controller Power Management
- US-20200177660-A1, Offload of Streaming Protocol Packet Formation

TECHNICAL SKILLS

Programming: C++, C#, Python, SQL, JavaScript, TypeScript, PowerShell
Web & APIs: REST APIs, ASP.NET, Node.js, React, Next.js
AI-Assisted Development: Claude Code, ChatGPT, prompt engineering, architecture, documentation, and test case creation
Databases: SQL Server, PostgreSQL, MongoDB
Operating Systems: Windows, Linux
Networking: TCP/IP, UDP, DNS, DHCP, ARP, routing protocols, switching
Tools: Git, Docker, Visual Studio, VS Code, Jira, Figma, Power BI
Practices: Agile, Scrum, CI/CD, automated validation, code review, workflow automation

EDUCATION

Bachelor of Science in Computer Science; Minor in Business Administration
Oregon State University | Corvallis, OR