

JACOB MEUSER

Software Engineer

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SUMMARY

Software engineer with experience spanning Unix systems development and modern full-stack applications. Began in web development and Unix infrastructure while co-founding an online business, before becoming an OpenBSD committer and ultimately contributing 800+ kernel-level C commits across the audio and USB subsystems. After a long career as a self-employed artist and business owner, returned my professional focus to software engineering and now build applications and systems tools using TypeScript, Next.js, PostgreSQL, C++, and OpenBSD.

TECHNICAL SKILLS

Languages: C, C++, TypeScript, JavaScript, SQL

Application Development: Next.js, React, Node.js, REST APIs, authentication, data modeling

Databases & Data: PostgreSQL, Prisma, relational database design, data extraction and transformation

Systems: Unix, OpenBSD, systems programming, device drivers, hardware/software integration

Tools: Git, GitHub, Vercel, GitHub Copilot

EXPERIENCE

OpenBSD Project — Developer / Committer (Open Source)

2006–2011

- Contributed 800+ kernel-level C commits across OpenBSD's audio and USB subsystems, developing device drivers and subsystem infrastructure in an environment emphasizing code review, extensive testing, and avoidance of regressions.
- Implemented audio and USB suspend/resume support and standardized USB device-detach handling across drivers; resolved concurrency and lifecycle problems by enforcing correct ordering of asynchronous work during device teardown and moving shutdown and revocation work to a separate, higher-priority task queue.
- Completed development of the azalia(4) Intel High Definition Audio driver, designing a master/slave control system that provided reliable high-level controls while preserving access to the interface's full widget topology; validated the implementation against hardware specifications, other Unix implementations, and diagnostic output collected from users across varied hardware.
- Co-developed sndio, moving audio format conversion out of the kernel's interrupt context and into a userspace sound server while adding resampling support; analyzed the ports tree to identify audio applications and added sndio support to approximately 30 third-party applications.

Independent Artist & Business Owner — Self-Employed

2005–Present

- Built and operated an independent business for more than 20 years, taking responsibility for client relationships, scheduling, production, delivery, and quality.
- Worked directly with customers to understand their goals, translate expectations into technically feasible products, and resolve constraints and tradeoffs before committing to delivery.

Granite Sky, LLC — Co-Founder / Web Developer

1999–2004

- Co-founded an online glass-art business and built its web presence, evolving the site from manually maintained pages to Perl and later PHP/MySQL as the business and its requirements grew.
- Operated the company's Internet infrastructure in-house, using OpenBSD for servers, routing, and firewalling; that work led to deeper involvement with OpenBSD, initially through maintaining and developing software ports.

Machinist — Metal Fabrication

1990s

- Manufactured metal components in a production environment, applying precision measurement, mathematics, and geometry; developed tools and process improvements to make production work more efficient.

PROJECTS

OpenBSD Device Support Database | [Live Site](#) | [GitHub](#)

TypeScript, Next.js, PostgreSQL, Prisma, Better Auth

- Building a searchable database of hardware supported by OpenBSD, extracting vendor and product identifiers from driver source code and normalizing device, vendor, driver, and alternate-name data into a relational PostgreSQL model.
- Developed APIs for querying hardware support and a user-contribution system for submitting device reports, with authentication, source provenance, review workflows, and separation between submitted and verified data.
- Designed the data and review model around traceability and correctness, preserving source information and report history while supporting automated verification and eventual human review.

hwinspect | [GitHub](#)

C++20, OpenBSD, libcurl, JSON

- Developing an OpenBSD C++ utility that parses system hardware information and queries the Device Support Database API to identify detected devices and compare locally reported hardware information with canonical database records.
- Built modular components for system-command execution, parsing, HTTP requests, JSON processing, and error handling to reliably transform system hardware information into database queries and support results.

EDUCATION

FES Institute — Certificate, Full-Stack Web Development

Feb 2026–Jul 2026

Shasta College — C++, Java, SQL, Statistics

Aug 2025–Dec 2025