Aaron Dyer

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SUMMARY

Embedded systems engineer with 3+ years of experience developing production firmware, managing diverse highperforming teams, and owning end-to-end project delivery. Focused on embedded C/C++, RTOS (ThreadX, FreeRTOS), and embedded Linux. At Hewlett Packard, cut printer power consumption by 50% and helped move customer ratings from 2.0 to 4.0 stars through system-level improvements and power state firmware optimization. Now applying the same end-to-end ownership at Lockette Privacy Software, building a privacy-first zero-knowledge age verification platform!

EXPERIENCE

Software / Firmware Engineer II *Jun 2022 – May 2025*

Hewlett Packard, Inc. *Vancouver, WA*

- Reduced average printer power consumption by 50% through RTOS-level power management work, supporting Energy Star compliance and contributing to an Amazon rating increase from 2.0 to 4.0 stars for HP DeskJet and Envy models.
- Developed and maintained firmware for HP DeskJet and Envy lines across ThreadX, RTOS, and embedded Linux, including device drivers, proxies, and system services in resource-constrained environments.
- Implemented an embedded web server and multilingual UI control layer (TypeScript/JavaScript on embedded Linux) deployed across multiple printer models to support international users.
- Refactored and modernized legacy C code into more maintainable and robust C++ components in areas touching wireless connectivity, power management, and user-experience flows.
- Served as Scrum Master for a 10+ person team, owning sprint planning, backlog refinement, and coordination with hardware, QA, and product stakeholders.
- Led an internal AI Hackathon project using GPT-4 and historical JIRA data for story point estimation, improving planning consistency and visibility for engineering leadership.
- Worked with factory-floor production support teams in Singapore and India, reverse-engineering undocumented legacy behavior and delivering real-time production fixes through HP's CI/CD pipeline.

Founder *Est. 2025 (Bootstrapped Startup)*

Lockette™ Privacy Software, LLC *Vancouver, WA*

- Founded Lockette Privacy Software LLC, focused on zero-knowledge age verification that proves "age≥N" without collecting or storing user data.
- Designed and implemented a privacy-first backend and shared cryptographic core (Rust, multi-platform bindings), keeping verification logic consistent, testable, and auditable.
- Defined integration patterns and APIs for customer websites, emphasizing low friction for developers and strong privacy guarantees for end-users.
- Built and maintain the public web presence at https://lockette.dev, encompassing business and technical development, progressing my theoretical prototype into a production-ready cross-compatible platform.
- Implemented a shared Rust core library used across client and server, with a minimal-data backend focused on auditability and testability, and bespoke android and iOS applications.
- Defined APIs and integration flows for customer sites, aligning technical design with privacy and usability goals.

IT Technician (Seasonal) *Summers 2018-2019*
Aberdeen School District *Aberdeen, WA*

- Deployed and repaired ChromeOS, Windows and Mac workstations and peripherals, handled day-to-day hardware and software issues for K-12 staff and students.

CORE SKILLS

Embedded Systems	Embedded C/C++, Assembly, Rust; ThreadX, FreeRTOS, embedded Linux, gradle; ARM, x86, RISC-V; power optimization, real-time constraints.
Software Tools	Python, TypeScript/JavaScript, Bash, Kotlin, Swift; Git, Docker, Kubernetes, MongoDB; Linux (RedHat, Ubuntu, Debian), JIRA, Qt.
Engineering Practices	Legacy system modernization; system-level debugging and reverse engineering; Agile / Scrum and cross-functional collaboration.

PROJECTS

Custom Digital Gauge Cluster -1961 Ford Falcon

- Embedded / Systems Design, combining 3D-model prototyping and embedded software/firmware programming, aiming to stay true to vintage styling while integrating modern conveniences.
- Designing a drop-in digital gauge cluster for a 1961 Ford Falcon, modeled on 1991 Mazda MX-5 instrumentation.
- Implementing analog sensor conditioning, real-time data tracking, servo-driven gauge needles, and 3 OLED displays on an Arduino-class microcontroller in embedded C.

NOAA Engineering Capstone *2022 University of Washington*

- Led a cross-disciplinary team to design and deliver a NOAA-sponsored prototype.
- Owned power electronics design, system integration, and sponsor reviews from concept to underwater deployment in the Puget Sound.

EDUCATION

Bachelor of Science - Electrical and Computer Engineering
University of Washington Seattle, WA • 2018 — 2022
Concentration: Embedded Computing Systems • Minor: Music