Jeff Peters

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PROFESSIONAL SUMMARY

Senior Software Engineer with experience building large-scale backend systems, IoT infrastructure, and cloud-connected services. Over a decade at Amazon scaling Linux-based IoT devices to 82,000+ delivery vehicles and engineering fraud detection systems processing millions of transactions daily. Deep expertise in embedded Linux, the Linux kernel (C/C++), boot security, distributed systems, and build/release infrastructure — with a track record of owning complex problems end-to-end across platforms, security, and infrastructure domains.

EXPERIENCE

Amazon | **Last Mile Connected Vehicle** | *Software Development Engineer II* July 2019 – *Present*

Technical owner of the device OS build, release, and boot-security platform for Amazon's connected fleet — spanning embedded Linux, the Linux kernel (C/C++), root of trust, developer tooling, and OTA delivery.

- Architected and deployed Linux-based IoT edge devices across Amazon's last-mile delivery fleet, scaling from 0 to 82,000+ active devices — enabling real-time camera-based ML inference for driver safety monitoring and live map routing updates.
- Owned Linux kernel modernization from a 4.15 baseline — evaluating 5.4 and 6.2 through driver proof-of-concepts — to the current 6.8 production kernel, porting C kernel-module source and device drivers.
- Designed a hardware root-of-trust boot-security stack using a TPM and a custom EFI bootloader — establishing cryptographic device identity at secure boot and full-disk encryption at rest across all hardware.
- Built core developer infrastructure: an automated OS image build-and-release pipeline using internal Debian packaging for Ubuntu, replacing a manual, error-prone Clonezilla imaging process — making device provisioning repeatable and OTA updates reliable.
- Engineered key CI tooling: a custom PRoot build system enabling full Ubuntu chroot builds and unit tests without sudo/root in a restricted CI environment, plus a QEMU-based Recovery OS for automated image validation and recovery.
- Engineered large-scale distributed device connectivity — a TCP proxy tunnel (prototyped on a 5-device pilot) and production named-socket communication — sustaining reliability across the full production fleet.
- Collaborated with ML and routing teams to define hardware requirements and integration contracts for on-device inference, accelerating time-to-production for new driver safety features.
- Performed hardware bring-up and low-level integration: integrated CAN bus readers to capture vehicle telemetry directly from Amazon delivery vans, and built early Raspberry Pi prototype kits for in-vehicle GPS logging and route-trace visualization.

Amazon | **Transaction Risk Management Systems (TRMS) Buyer Fraud Team** | *SDE II* October 2014 – July 2019

- Engineered Java Spring microservices to serve ML fraud-classification models at scale, evaluating millions of orders per day to detect and prevent fraudulent transactions across Amazon's global marketplace.
- Improved model inference pipeline reliability and reduced latency, contributing to reductions in fraud losses and improved customer trust at global scale, cut detection time from 5 minutes to 30 seconds.
- Partnered cross-functionally with data scientists and operations to tune detection thresholds and reduce false-positive rates, directly improving seller and buyer experience.
- Senior escalation point for on-call incidents, leading root cause analysis under Prime Now's 1-hour SLA.

SKILLS

Languages: C, C++, Python, Java, Bash, Perl, PHP, JavaScript, SQL

Cloud & Infrastructure: Embedded Linux, Linux kernel, device drivers, hardware root of trust, TPM, secure boot, EFI bootloaders, Debian packaging, systemd, QEMU, CI/CD, AWS

Core Strengths: Embedded Linux / IoT edge devices, OS build & release pipelines, developer tooling & CI/CD, boot security & hardware root of trust, distributed systems, backend microservices

EDUCATION

Brigham Young University — Bachelor of Science in Computer Science Provo, UT

PROJECTS

- Self-hosted LLM inference stack (Ollama, Open WebUI) on local hardware
- Comma.ai openpilot contributor — custom kernel development for a connected-vehicle platform (commaai/vamOS) at an in-person semi-autonomous-driving hackathon.

ADDITIONAL EXPERIENCE

Insidesales.com | *Senior Software Engineer / Team Lead* August 2012 – October 2014

- Led a team building and maintaining a LAMP/PHP sales acceleration platform serving enterprise clients, including deep Salesforce CRM integration via Apex API.
- Mentored developers through a structured coaching program covering onboarding and 1:1 support as part of a senior leadership role I created.
- Deployed and customized Asterisk PBX telephony infrastructure, distributed multi-server dial plans.

Prosper, Inc. | *Software Engineer II* May 2011 – July 2012

- Developed and maintained Perl MVC (Catalyst) web applications on a LAMP stack, with FastCGI backend.

Microsoft | Windows 8 | *Software Design Engineer* September 2009 – February 2011

- Developed C++/COM components for the Windows 8 application framework using Win32 ATL, contributing to core shell and platform APIs shipped in a global OS release.

Microsoft | Windows Experience | *Software Development Intern* May 2008 – July 2008

- Added document importing/conversion to Windows Scanning via OCR in C++

BYU | Computer Science Dept. | *Research Assistant, TANGO Project* January 2007 – September 2008

- Designed and built a collaborative Eclipse RCP-based framework (TANGO) enabling team productivity tooling for software development research at BYU.