

ALEX WOODS

alex@alexwoods.me · San Francisco, CA · Relocating to Seattle, WA

TECHNICAL PROFILE

Mission-critical systems specialist with 6+ years hands-on experience deploying, validating, and repairing high-density hardware. Field experience across 9 MDF/IDF installations and multi-site enterprise rollouts in banking and retail, plus 76+ custom systems built and stress-validated. Works confidently at the motherboard level — BIOS/UEFI tuning, PCIe lane configuration, thermal management, and VRAM fault diagnosis through full restoration. Runs a production 4-node Linux environment with 29 containerized services under staged rolling updates with rollback. Travels for deployments and wired to find root cause before declaring defeat.

WORK EXPERIENCE

Network Infrastructure Technician (Contract)

Jun 2026 – Present

Tatum Integration — Multi-site field deployment

- **Bank acquisition conversion (Fulton Bank / Blue Foundry):** Completed 4 full branch conversions as crew member — MDF rack builds to published standard, full network cutover, VLAN'd switch port maps, Meraki-to-Cisco AP migration, and teller workstation builds (WinTerm/VDI, Argo check scanners, signature pads). Led remediation across 10 additional sites on the final day, resolving issues escalated from other crews.
- **Enterprise switch refresh (REI):** Removed legacy Cisco stacks and installed Juniper EX4400 stacks across MDF/IDF — 100G DAC stacking, 10Gb SFP+ optics, OM4 fiber uplinks — during after-hours maintenance windows with documented rollback procedure.
- **Structured cabling:** 9 MDF/IDF installations to CAT6 Belden/Siemon spec, 568B termination, conduit and service-loop standards; rack and patch panel work.
- **Cutover validation:** Connectivity checks and Test-and-Turn-Up with client NOC and remote network engineering over live bridge; photo documentation and site check-in/out.

Hardware Systems Architect & Infrastructure Consultant

2018 – Present

Independent — San Francisco Bay Area, CA

- Designed, assembled, and stress-validated 76+ custom high-performance systems (gaming, workstation, server); zero field failures.
- Executed motherboard-level modifications: BIOS/UEFI tuning, voltage/clock optimization, PCIe reassignment, and thermal compound replacement across LGA and AM4/AM5 platforms.
- Diagnosed and resolved VRAM hardware failures end-to-end — fault isolation, physical repair, CUDA validation, and extended burn-in monitoring — restoring hardware clients had written off as dead.
- Resolved complex multi-layer hardware/software failures across Windows and Linux: driver conflicts, IRQ contention, kernel panics, and firmware mismatches.

Contract CAD Engineer

Jun – Aug 2023

Early-stage Startup (Confidential) — San Francisco, CA

- Designed production-intent SSD enclosures with tight mechanical tolerances, thermal dissipation paths, and DFM constraints; drove rapid FDM prototyping cycles from concept to manufacturable design.

Robotics Coach

Jun – Sep 2022

Robolabs — Dublin, CA

- Coached students on VEX robotics systems, engineering fundamentals, and competition strategy.
- Administered team server infrastructure: network config, internal web hosting, and security hardening.

PERSONAL INFRASTRUCTURE LAB

- **Multi-Node Linux Environment:** 4-node fleet — compute host, NAS, dedicated DNS node, and a macOS node — running 29 containerized services via Docker Compose. Redundant AdGuard Home DNS across two nodes, UniFi VLAN segmentation, UFW firewall, NFS shared storage, and four public endpoints served through Cloudflare Tunnel with authentication.
- **Root-Cause Diagnostics:** Traced a 5–30s media playback stall to a specific upstream project defect after eliminating GPU, NAS, and tunnel hypotheses with measurements; shipped a dependency-free workaround. Separately resolved a DNS upstream misconfiguration across both resolver nodes, restoring 10/10 fast queries at ~35 ms average with zero stalls and blocking intact.
- **GPU & Hardware Validation Lab:** NVIDIA/AMD GPU configuration across Linux distributions; PCIe config, CUDA validation, driver triage, dual-GPU hardware transcode, VRAM fault repair.

TECHNICAL SKILLS

Hardware: Custom system assembly (76+ builds), BIOS/UEFI tuning, PCIe configuration, VRAM repair, thermal management, hand tools, FDM prototyping, DFM-aware mechanical design

Systems & Networking: Linux (Ubuntu, Debian, Arch), Windows 10/11, kernel/driver troubleshooting, UniFi VLAN segmentation, UFW, AdGuard Home DNS, Cloudflare Tunnel, VPN routing, Layer 1 cabling

GPU & Compute: NVIDIA CUDA validation, AMD ROCm, multi-GPU configuration, hardware transcode, local LLM inference under VRAM constraints (Ollama, ComfyUI)

Platform: Docker / Docker Compose, Prometheus, Grafana, node-exporter, cadvisor, Python, Bash, scheduled jobs, automated diagnostic collection

EDUCATION

APU Ritsumeikan Asia Pacific University, Japan — Undergraduate studies, Data Science & Systems Operations, 1 year completed

Buildspace S5 — Project-based accelerator, startups and emerging technology

Dublin High School, Engineering Academy — GPA 3.8