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Summary

Staff Software Engineer with 8+ years at Google Compute Engine, architecting and delivering foundational infrastructure for hyperscale distributed systems. Expert in low-level systems, virtualization, and hardware/software co-design, with a proven track record of driving multi-year, cross-organizational initiatives that yield significant improvements in resource efficiency, performance, and fleet-wide reliability.

Experience

Oct '25 – Present **Staff Software Engineer, Compute Engine, Google, Seattle, WA**

- Spearheaded a 10+ engineer cross-org initiative to reduce virtualization overhead across the GCE fleet. Delivered fleet-wide monitoring system, binpacking regression test framework, and targeted reductions to deliver \$15M+ in annualized savings on CPU, memory, and network resources.
- Influence product and SKU definitions to deliver resource efficiency while achieving generational improvements in performance, directly impacting Google's business margins: +10% CPU for C4, +3% memory for C4D, and +3% CPU for N4.
- Co-design novel hugepage allocation algorithm for GCE hosts that reduces memory fragmentation, improving VM density by 250% and lowering host memory pressure.
- Analyze the multi-year server roadmap and direct long-term strategic investments in hypervisor architecture and kernel resource management.

Aug '21 – Oct '25 **Senior Software Engineer**

- Led a 7-engineer team to productionize GCE's hypervisor feature flag framework and define feature release policy. The system increased velocity by 30% and reduced production rollback incidents by 50% across a 300+ engineer organization.
- Architected the framework to support split-version hypervisor deployments, unblocking parallel feature rollouts and de-risking deployments for high-SLA VMs.
- Drove operational excellence as on-call lead, using postmortems to systematically reduce incident detection time (MTTD) and eliminate engineering toil.

Aug '17 – Aug '21 **Software Engineer**

- Led the end-to-end development of a high-availability NVRAM service supporting millions of GCE VMs, owning hardware specification compatibility, API design, scalability, and disaster recovery; achieved 5-nines regional reliability.
- Pioneered a predictive failure detection system using fleet-wide hardware telemetry, creating the capability to automatically drain at-risk hosts before critical hardware failures occurred.

Education

2013–2017 **Bachelor of Science, Computer Science, Tufts University, Medford-Somerville, MA, Summa Cum Laude (3.91 GPA)**

Skills

- **Languages & Technologies:** C++, Go, Python, SQL, gRPC
- **Domains:** Distributed Systems, Virtualization, Cloud Infrastructure, Server Architecture, SRE, Incident Management
- **Leadership & Communication:** Public speaking (Presented to Apple SVP Craig Federighi); Technical writing (Blog featured on ZDNet, Mashable, Hacker News)