

Addison Hammer

Principal Systems Architect & Robotics Engineering Leader

📍 Charleston, SC & Global Advisory ✉ addison.hammer@gmail.com 🌐 linkedin.com/in/addisonhammer 🌐 hammerlabs.io

// EXECUTIVE SUMMARY

Hands-on technical leader and systems architect with 13+ years specializing in hyperscale datacenter robotics, manufacturing automation and machine vision, and distributed edge fleet infrastructure. Former Google Senior Staff / Area Lead with 20+ years total engineering experience spanning physical AI, robotic manipulation, datacenter thermal and mechanical constraints, trustless machine-vision verification, and zero-trust firmware deployments. Track record directing \$20M+ annual CapEx/OpEx engineering programs, leading 35+ person multi-disciplinary engineering organizations, advising robotics ventures, and deploying autonomous systems across live global datacenter footprints.

13+ Years
Datacenter Automation
Led Google robotics and physical automation programs across live facilities from 2013 to 2026.

700+ Units
Global Autonomous Fleet
Architected edge software, telemetry, and zero-trust OTA platforms operating across global datacenter footprints.

12+ Products
Production Robotics
Directed concept-to-deployment engineering for physical AI and automated robotics across Google infrastructure and venture startups.

// CORE COMPETENCIES & TECHNICAL ARSENAL

// HYPERSCALE SPECIALIZATION (13+ YRS)
Datacenter Facilities, Operations & Robotics
Hyperscale Datacenter Ops
Accelerator Deployments and Maintenance
Datacenter Infra Design Data Security
DCIM Software and Strategy Datacenter Logistics
Open Compute Project (OCP)

// AUTONOMY & VISION
Physical AI & Autonomous Robotics
Autonomous Mobile Robots (AMR) Visual SLAM
AI Machine Vision Sensor Fusion PyTorch / CUDA
ROS2 / Nav2 / MoveIt2 Kinematics & Motion Planning

// EMBEDDED & HARDWARE
Edge & Embedded Systems
NVIDIA Jetson (Orin/Thor) Embedded Linux / RTOS
Microcontroller Firmware (C/C++)
Hardware-in-the-Loop (HIL)
Root-of-Trust Hardware Security

// LEADERSHIP & FLEET INFRASTRUCTURE
Hands-On Leadership & Fleet Systems
0-to-1 System Architecture
Distributed Fleet Telemetry Technical Due Diligence
Lean Eng Leadership Zero-Trust OTA Pipelines
Golang / GCP / Kubernetes

// PROFESSIONAL EXPERIENCE

Hammer Labs LLC | Charleston, SC
Principal Systems Architect & Fractional CTO
2026 - Present

- ▶ Advise datacenter operators, robotics startups, and venture funds on physical AI architecture, high-density AI cluster servicing constraints, edge compute integration (NVIDIA Jetson, ROS 2), and 0-to-1 engineering roadmaps.
- ▶ Design and prototype production-grade edge hardware/software MVPs, reducing client development cycles by 40%.
- ▶ Perform comprehensive technical due diligence, codebase evaluations, and architectural feasibility audits for seed and Series A investment syndicates.

Datacenter Robotics Area Lead (Senior Staff)

- ▶ Defined the multi-year technical roadmap for global datacenter robotics, directing \$20M+ annual CapEx/OpEx and leading a 35+ person cross-functional organization of software and robotics hardware engineers.
- ▶ Represented Google within the Open Compute Project (OCP) Datacenter Facilities working group; led 'Design for Robotics' technical sessions in collaboration with Meta and Microsoft.
- ▶ Directed Google's Robotics Startup Outreach & Partnership Program; sourced emerging hardware/software ventures, managed strategic vendor allocations, and negotiated production pilots inside live datacenters.
- ▶ Architected and deployed an enterprise fleet management and telemetry platform (Golang, Python, GCP, Pub/Sub, Kubernetes) orchestrating 700+ autonomous edge devices globally with zero-trust OTA deployment pipelines.
- ▶ Patented and deployed a trustless machine-vision verification system achieving 99.999% reliability, enforcing automated data-handling compliance and generating auditable logs across 27% of Google's global enterprise media operations.
- ▶ Architected the software integration and fleet management system for Google's robotic hard disk lifecycle automation program.
- ▶ Instructed and mentored 75+ engineers across the global organization on scalable software standards via 1,400+ technical code reviews.

Google | Charleston, SC

July 2013 – May 2018

Datacenter Automation TPM

- ▶ Pioneered the initial datacenter automation roadmap, directing early cross-functional engineering teams in deploying automated disk erasure and physical hardware servicing platforms across global facilities.
- ▶ Eliminated high-risk manual procedures with auditable automated workflows, achieving multi-million-dollar labor and compliance savings.

// VENTURE & ADVISORY LEADERSHIP

X1 Pipeline | Charleston, SC

2024 – Present

Chief Technology Officer (Venture Partner)

- ▶ Built the 0-to-1 technology architecture for an AI-driven venture due diligence platform; delivered investor pitches and participated in capital syndication rounds.
- ▶ Architected automated LLM data-extraction pipelines processing 500+ monthly startup evaluations, compressing diligence workflows by 65%.
- ▶ Directed a distributed team of 6 engineers across backend infrastructure, cloud APIs, and security compliance.

VisionAnchor | Ljubljana, Slovenia

2023 – 2026

Head of Technology (Advisor)

- ▶ Directed technical architecture for a smart marine IoT platform; supported founders in investor presentations, fundraising strategy, and technical due diligence defense.
- ▶ Supervised embedded C/C++ firmware, sensor fusion pipelines, and mobile edge interfaces, successfully transitioning hardware from prototype to production deployment.
- ▶ Advised core founders on technical risk mitigation, roadmap prioritization, and pilot deployments.

VentureSouth | Charleston, SC

2024 – Present

Angel Investor & Technical Advisor

- ▶ Evaluate early-stage deep-tech, robotics, and SaaS startup investment pitches, advising syndicate members on technical feasibility, engineering risk, and IP defensibility.

// FOUNDING & EARLY CAREER EXPERIENCE

- ▶ **Aegisound, LLC** | *Head of Engineering (Employee #2)* (2006 – 2011) — Bootstrapped engineering operations for an early-stage defense hardware startup; architected automated acoustic test cells, implemented ERP infrastructure, and built quality systems compliant with SBIR and U.S. Air Force contract mandates.
- ▶ **Robert Bosch GmbH** | *Automation / Maintenance Engineer* (2012 – 2013) — Managed cycle uptime and industrial robotics across 100+ automated assembly stations.
- ▶ **Quadrant EPP** | *Manufacturing Engineering Manager* (2011 – 2012) — Managed plant-wide automation and manufacturing engineering.

// GRANTED PATENTS

US PATENT (GRANTED) Assignee: Google LLC

Trustless Machine-Vision Automated Compliance and Media Verification Systems

Invented high-reliability optical verification architecture providing cryptographic audit trails and automated data-handling compliance for mission-critical hyperscale infrastructure.

US PATENT (GRANTED) Assignee: Google LLC

Autonomous Robotic Systems and Methods for Datacenter Media Servicing and Lifecycle Operations

Invented robotic end-effectors, precision kinematics, and autonomous handling systems for automated server media servicing across global datacenter footprints.

// EDUCATION & ACADEMIC CREDENTIALS

// GRADUATE DEGREE

Johns Hopkins University

M.S. in Mechanical Engineering

Focus: Robotics & Control Systems

// UNDERGRADUATE DEGREE

Virginia Tech

B.S. in Mechanical Engineering

Minor: Business Management (30+ Additional Credits)

// ACTIVE WORK & TECHNICAL DEMOS

// PRODUCTION CASE STUDY • GOOGLE LLC

Autonomous Hard Drive Servicing & Fleet Management

Autonomous Mobile Robots Fleet Orchestration (GoLang/GCP)

Machine Vision Compliance Zero-Trust OTA

Open Compute Project (OCP)

Autonomous robotic platform replacing failed datacenter hard drives directly from floor-staged kits. Architected the software and telemetry platform orchestrating the global robot fleet, including cryptographic media verification and automated data-handling compliance.

// PHYSICAL AI & EDGE SYSTEMS • COMING SOON

Autonomous Edge Vision & Spatial SLAM Pipeline

NVIDIA Jetson AGX TensorRT ROS 2 Visual SLAM

Low-latency edge inference runtime executing spatial SLAM, real-time vision-language models, and sub-50ms obstacle pose estimation for ruggedized autonomous mobile manipulators.