

Matthew Tesch

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I've run high-performance, all-flash, hyperconverged infrastructure across Linux, Windows and UNIX for 15 years, most recently air-gapped at Boeing. I've set myself the constraint secure environments live with: local models only, no cloud. They talk to each other and act on real machines, and I audit them technically: every claim is checked against logs, live system state and measured baselines before it's trusted. I want to build and use systems like this, hands-on with both the hardware and the software, not just keep the infrastructure under them running, on a team with the will and the resources to do it.

ROBOTICS AND AI WORK

lightBot, home robot on NVIDIA Jetson personal project 2026 – present

- A Hiwonder ROSOrin Pro rebuilt from a blank drive on stock JetPack 6, Ubuntu 22.04 and ROS 2 Humble, with none of the vendor's software. I recoded the controller-board driver with Claude Code, e-stop included.
- It has no wheel encoders, so odometry comes from the LiDAR (rf2o) and the camera (cuVSLAM), fused in an EKF. That feeds SLAM Toolbox, AMCL and Nav2.
- Open-vocabulary detection (NanoOWL, OWLv2) runs on the Jetson GPU. The robot looks around a room and puts what it sees on the map. The 5-DOF arm runs on MoveIt 2 with a URDF I measured from the factory meshes.
- The AI on the robot can read everything and move nothing. Any motion it proposes needs a human yes.
- Wrote the whole build up as a 37-chapter guide where every chapter ends in a test you run before the next (wiki.matttesch.com/lightbot). Code is on GitHub under MIT (PublicRobot), and there's a video of it following me.

Home AI stack, local models, voice and agents personal project ongoing

- A Mac mini runs Open WebUI, Ollama, LM Studio, whisper.cpp, Kokoro, SearXNG and Home Assistant.
- Voice assistant on an RTX workstation with a wake word trained on my voice; it searches, plays media and runs the lights.
- Buddy, an iOS/Android app in React Native and TypeScript that talks to the stack from anywhere (repo).
- A fully local coding agent on an Intel Arc laptop (Qwen 27B on llama.cpp Vulkan), benchmarked head to head against an M4 Max (repo).

Drones, DJI camera drones personal ongoing

- Aerial video and close-in structure inspection with GPS camera drones ([windmill orbit](#)).
- Keep them flying from a boneyard, the aviation way: salvage parts from crashed and retired DJI airframes and rebuild working aircraft from them.

EXPERIENCE

Boeing, Senior Systems Administrator Seal Beach, CA 07/2024 – present

- Run air-gapped secure systems across several sites under ISSM/ISSO rules, from desktops up to virtualization clusters, including their networking, storage and Infoblox DDI.

CACI / NAVSEA, Infrastructure and Systems Administration NT5 Norco, CA 07/2023 – 07/2024

- An OpenShift deployment had blocked developers for months; I found the root cause and fixed the code.
- Built and patched server, network and security infrastructure; moved work toward Terraform and Kubernetes.

Skyworks Solutions, Principal Infrastructure Administrator Irvine, CA 05/2021 – 05/2023

- Looked after 1,000+ Windows and Linux servers across AWS, Azure and VMware.
- Merged Active Directory from the Silicon Labs automotive acquisition with minimal downtime.
- Brought in Ansible, CrowdStrike on every Linux server and Infoblox IPAM; automated audit evidence pulls.

Canon Medical Systems, Network Engineer II Tustin, CA 03/2019 – 05/2021

- Moved 500+ servers from Cisco UCS/VMware to Nutanix, which halved the server footprint and power draw.
- Standardized Linux on RHEL 7.9 with AD integration and introduced infrastructure-as-code deployment.

HireRight, Senior Systems Engineer Irvine, CA 03/2018 – 03/2019

- Led the Linux side of the Nashville to Las Vegas datacenter merger; set up Splunk logging and Duo MFA.

Lifescrypt, Senior Systems Engineer Newport Beach, CA 05/2013 – 03/2018

- Built a hybrid cloud app on AWS Elastic Beanstalk that saved about \$300K in hardware.
- Rolled out Infoblox DDI (DNS, DHCP, IPAM) company-wide across 5 sites.

TOOLS

Robotics ROS 2, Nav2, SLAM Toolbox, AMCL, MoveIt 2, URDF, EKF fusion, cuVSLAM, nvblox, Jetson Orin

AI llama.cpp, Ollama, LM Studio, Open WebUI, Whisper, Kokoro, NanoOWL/OWLv2, MCP

Infrastructure All-flash HCI (Nutanix, VxRail), VMware, Linux (RHEL, Fedora, Ubuntu), Windows Server, UNIX, Infoblox DDI, Ansible, Terraform, Docker/Podman, OpenShift

Scripting Bash, Python, PowerShell, SQL **Certification** CompTIA Security+ ce, through 09/2029