DUSTY SCHULTZ

Finish carpenter (12 yrs) turned AI builder — geospatial systems, LiDAR tools, LLM infrastructure.

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SUMMARY

Twelve years on job sites taught me exactly where construction workflow fails. Now I build software to fix it. I develop geospatial systems, LiDAR-driven construction tools, and LLM tooling — not as an outsider theorizing about the trades, but as someone who has lived the problems. That combination of trade-floor depth and active dev portfolio is rare. Currently at Hennepin Technical College deepening the engineering foundation. Targeting AI training contracts, forward-deployed roles at vertical-AI startups, and construction-tech partnerships.

ACTIVE PROJECTS

GEOSPATIAL · COMPUTER VISION · GIS

Map Generator

Artifact-detection system for Cultural Resource Management firms — the consultants who must locate historic sites before construction can legally break ground. Ingests historic aerials, plat data, MnDOT records, and LiDAR to score and rank survey priority across Dakota and Goodhue County, MN. Stack: Python, GIS pipelines, LiDAR overlays, LLM-assisted scoring.

LIDAR · CONSTRUCTION TECH · MOBILE

Plumbr

Field-first LiDAR tool that kills the PDF blueprint workflow. Finish carpenters don't build from drawings — they build from what's actually in front of them. Plumbr scans the real environment with iOS LiDAR and generates cut lists from ground truth, not design intent. Phase 1 MVP scoped in Linear. Stack: iOS LiDAR APIs, computer vision, mobile-first.

WRITING & RESEARCH

HUMAN-AI BEHAVIOR · BEHAVIORAL SCIENCE · SUBSTACK

Behavioral Inference UX — BI-UX Publication

Six-part research series on how people actually behave alongside AI systems — not how they report behaving. Grounds behavioral claims in observational data rather than self-report, drawing on Nisbett & Wilson and dual-process cognition research. Topics: verification gaps, delegation thresholds, prompting as behavioral phenotype, identity under automation, and cognitive dependency formation. Published at dustyjmschultz.substack.com. Adjacent: “The Medium That Thinks Back” and interactive React UX component.

PORTFOLIO — CASE STUDIES

SYSTEMS DESIGN · CLOUD INFRA · ALGORITHMIC TRADING

Multi-Strategy Trading System

Algorithmic trading system running against Binance.US on a GCP Ubuntu VM. The core constraint: execution order treated as a first-class architectural invariant — not an afterthought bolted on. Demonstrates pipeline design and multi-component coordination under strict ordering guarantees.

EXPERIENCE

Independent Builder & Researcher

2025 – Present · Hastings, MN

Building geospatial systems, LiDAR pipelines, and LLM-driven tooling from scratch. Every project treats AI as an active cognitive layer — not a code assistant, but an integrated part of the research and design process.

Finish Carpenter

2013 – 2025 · Minnesota

Twelve years of high-tolerance interior finish work: trim, cabinetry, built-ins, custom installs across residential and light commercial.

- Navigated material shortages, punch-list failures, and scheduling drift firsthand — the exact workflow breakdowns vertical AI tools are built to solve.
- Read blueprints and managed variance between drawings and field reality — the core problem space LiDAR scanning is designed to close.
- Trade-floor depth that isn't soft domain knowledge — it's the problem set driving every product decision in current builds.

EDUCATION

Hennepin Technical College · AI / Software Development · 2025 – Present

SKILLS

Languages & tools: Python, JavaScript/TypeScript, React, Git, Linear, Playwright, Cursor, Claude Code, MCP.
AI & ML: LLM tooling, RLHF / model evaluation, prompt engineering, Anthropic & OpenAI APIs.
Cloud & infra: Google Cloud Platform, Ubuntu VM deployment, ordered-execution architectures.
Domain: finish carpentry (12 yrs), residential construction workflow, geospatial / GIS, LiDAR pipelines, computer vision.
Working style: systems thinking, build-oriented execution, dense / high-signal communication, cross-register fluency (trades ↔ engineering).