

MARK HOLLAND

Senior AI Solutions Engineering · Forward Deployed Engineering · Healthcare Technology

Open to remote AI roles and select AI projects.

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PROFESSIONAL SUMMARY

AI solutions engineer and hands-on architect who takes AI from the first discovery call to secure production systems in regulated healthcare. Designs and builds generative and agentic AI applications, RAG pipelines, and MCP integrations that connect to enterprise systems like Salesforce, ServiceNow, Gainsight, and Loopio. Leads engineering and design for an AI Solutions team at a national healthcare data company and owns QA, testing, DevOps, and governance through go-live. Built seven AI applications there, five now in production, including an RFP tool that cut response time from 3 to 4 months to 2 to 3 weeks and a payer churn app that flags at-risk accounts after mergers and acquisitions. Chooses models by cost, speed, and risk, routes work across Claude, GPT, Gemini, and open-source models, and builds PHI and PII protections in from day one. Builds daily with Claude Cowork, Claude Code, and Codex.

CORE TECHNICAL SKILLS

- **Discovery & Delivery:** Stakeholder discovery calls, Workflow mapping, Requirements gathering, Use-case scoping and ROI assessment, PRDs and technical specifications, Deployment and go-live support.
- **AI Models & Agents:** Generative AI and agentic AI, LLM applications with Claude, GPT, Gemini, and open-source models (Ollama), Model evaluation and selection by cost, latency, and risk, Model routing, Multi-agent orchestration, LangChain, LangGraph, RAG and vector databases, Structured outputs, Prompt and context engineering, MCP and tool-connected agents, Workflow automation.
- **AI Coding Tools:** Claude Cowork, Claude Code, Codex, GitHub Copilot, Cursor, Windsurf.
- **Healthcare Data & Compliance:** HL7 v2, FHIR R4, X12 837 claims and 835 remittance (revenue cycle), PHI and PII governance, Tokenization and egress controls, Audit logging, Turning regulatory requirements into technical controls, HIPAA Security Rule, SOC 2, ISO 27001.
- **QA & Testing:** Playwright browser automation, pytest, API, accessibility, performance, and security testing, AI code audits, Acceptance-criteria verification, CI quality gates.
- **Full-Stack Development:** Python, FastAPI, SQL, TypeScript, JavaScript, React, Next.js, PowerShell, Bash, Supabase.
- **Data & Integrations:** Enterprise data integration pipelines, SQL Server, PostgreSQL, REST APIs, Salesforce CRM, ServiceNow, Gainsight, Loopio, Entra ID.
- **Cloud & DevOps:** AWS (EKS, EC2, S3, KMS, Bedrock), Azure, Azure DevOps CI/CD, Kubernetes, Linux, Git, Datadog observability, IAM and access control (Entra ID).

AI APPLICATIONS BUILT AT WORK

Payer Churn Signal App. Analyzes how M&A activity affects healthcare payer clients, combining Gainsight, Salesforce, and ServiceNow data with AI agents that scan the news for M&A signals, then alerting account teams to at-risk clients. Spots accounts likely to leave after a merger or acquisition, while there's still time to save them; now moving into the core platform.

RFP Assist. Drafts RFP responses from the company's Loopio answer library, with reviewer approval on every answer and built-in checks that flag claims against registered figures, catch answers still naming another health plan, and block export while placeholders remain. Cut average RFP response time from 3 to 4 months to 2 to 3 weeks.

Application Testing Engine. Runs automatically when an app is loaded into Azure DevOps and on every pull request: static analysis, AI code audit, unit, API, accessibility, performance, and security tests, plus Playwright runs that click every link and button and use the app like a human, then sends the team a detailed report.

AI Use Case Submission Platform. Enterprise intake for AI app requests from managers and directors: an extensive questionnaire, LLM scoring against an ROI rubric, approval notifications, and one-click PRD and specification generation after the discovery call.

Prompt, Skill & Agent Library. Company-wide library of prompts, Skills, skill chains, and agents by team and role, with peer voting to keep the most helpful, downloads for major AI apps and IDEs, and AI adoption training.

Enterprise Platform MCP (in development). Gives AI assistants controlled access to a large healthcare data platform: one shared core, four adapters, 13 tools, and human approval before anything reaches production.

Stress Tester (prototype). Load testing tool with real and demo modes, built in one session for another team.

Observability & Governance Engine (stage one built). Sits between an organization's AI applications and the model providers and records every AI call with the exact data versions behind it.

INDEPENDENT PLATFORMS

PresidioFlow (healthcare compliance platform). Repairs records that regulated data pipelines reject and cryptographically proves every fix. Validates and remediates HL7 v2, FHIR R4, X12 837, and X12 835 records with tiered rules and LLM remediation (48% tier-one auto-repair on test data). PHI is tokenized so it never reaches an LLM, every change lands in a hash-chained audit ledger, and signed evidence packs map to SOC 2, HIPAA, and ISO 27001.

LawLynx (multi-agent legal platform). 51 specialized AI agents built in Next.js and TypeScript on Supabase and PostgreSQL. A PII gate redacts all 18 HIPAA identifiers before content reaches an external model, a router scores query complexity to pick the model tier, and high-stakes questions go to a three-model panel (Claude, GPT, Gemini).

Command Center OS (in development). My own AI operations platform: a harness of harnesses that runs Claude Code, Codex, and Gemini sessions side by side, routes each job to the cheapest capable model under per-role limits, keeps a Git-backed memory with human-approved edits, and puts every external action behind an approval gate. Runs locally today; VPS deployment and team use are next.

Contractor Project Management & Estimating Platform. Built for a specialty contractor to replace an Excel estimating workbook: rate-library estimating, job costing with budget vs. actual, e-signed proposals with a tamper-evident fingerprint, change orders, a customer portal, time tracking, AI drone-survey takeoff, and QuickBooks export. Next.js, Prisma, Supabase, and Clerk.

CLIForge. My own web app that turns plain-English requests into AWS, Azure, and Google Cloud CLI commands and Terraform; a teammate and I used it to cut weeks of Azure work to days.

PROFESSIONAL EXPERIENCE

Senior AI Solutions Engineer, AI Solutions Team

2026 to Present

| National healthcare data company | *Remote*

- Lead engineering and design for the AI Solutions team's apps, and own QA, testing, and DevOps for the team.
- Design the architecture for each app, including data flows, enterprise integrations, model choice, and security controls, then build it.
- Move ideas from prototype to production fast, delivering six enterprise apps in the first few months on the team.
- Own governance and observability for the team's AI apps, with Datadog monitoring and automated testing on every pull request.
- Run discovery calls with managers, directors, and business-unit teams for each approved app: map workflows, pain points, data sources, and success metrics, then turn the findings into requirements, PRDs, and specs.
- Carry each application from discovery through build, testing, deployment, and go-live.
- Authored the company-wide AI strategy proposal and executive briefings for enterprise AI adoption.

Software Development Engineer | National healthcare data company | *Remote*

2024 to 2026

- Executed enterprise releases and customer migrations across Azure and AWS, troubleshooting through cutover, including off-hours production deployments.
- Built Azure DevOps pipelines, Kubernetes and Linux deployments, and a Python CLI that automates Azure tagging.
- Wrote SQL, PowerShell, and Bash automation for releases and migrations; administered SQL Server.

DevOps Engineer | National healthcare data company | *Remote*

2022 to 2024

- Converted manual deployment processes into Azure DevOps CI/CD pipelines, cutting deployment time by 80 to 90 percent across multiple application teams.
- Contributed to migrating a business-critical application from PCF to AWS EKS; provided production support, release coordination, and incident response.

System Administrator | National healthcare data company | *On site*

2017 to 2021

- Supported production and non-production environments for business-critical healthcare applications, covering Linux administration, change control, and incident management.
- Coordinated software implementations and customer-facing product migrations using Azure DevOps, PCF, and PowerShell; served in a 24x7 on-call rotation.

Earlier career: clinical work, pharmaceutical regulatory systems, telecom at Sprint, and Marketo.

EDUCATION & CERTIFICATIONS

- Bachelor of Science, Computer Information Systems, DeVry University, Atlanta, GA
- Marketo Certified Expert