DOUGLAS J. McKAY

AI Solutions Architect | Former Marketing Director | Full-Stack Developer

Cross-department AI for marketing, sales, operations and the factory floor

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Portfolio: dougmckay.info | Creative AI demo: creative-automation.doug-mckay84.workers.dev | Remote-first; onsite as needed

EXECUTIVE SUMMARY

AI solutions architect, former marketing director and full-stack developer who takes AI from pilot to **adopted, governed, measurable automation across the business**. 20+ years across full-stack engineering, infrastructure and B2B marketing leadership; ~25 shipped AI and software products. I run discovery with whole departments, design agentic workflows around the tools teams already use, deploy them inside secure, IT-controlled boundaries, and **train the people who use them**, because adoption, not technology, is the hard part. Current work spans AI creative production for brands, revenue and sales intelligence, back-office reporting, field operations, and AI vision for retail and industrial settings, including consumer-brand work in the regulated cannabis market.

CROSS-DEPARTMENT AI IMPACT

- **Marketing & Creative:** AI content pipelines that turn one brief or approved photo into localized, on-brand, compliance-checked creative for every channel and market (Adobe Firefly, Express, Veo); scheduled social-content automation; AI catalogue imagery for three manufacturers.
- **Sales & Revenue:** Agentic prospecting and lead-intelligence systems integrated into existing CRMs (315 target accounts across 12 verticals scored and mapped for one manufacturer); revenue dashboards for leadership.
- **Operations & Back Office:** Scheduled agents that replaced a contractor's manual spreadsheet reporting with real-time API data; automated field-route planning; AP-workflow and financial-reporting automation; license/subscription management platform (CUBES AI).
- **Factory, Retail & Computer Vision:** AI inventory tool for Walmart that used in-store security-camera feeds to give AI agents sales and inventory data for dashboards; AI vision for factory-automation and robotics use cases with industrial-computing clients.
- **Governance & Security:** Private, on-premises AI inference (HIPAA/FedRAMP-aware design, zero cloud egress), human-in-the-loop approvals, pixel-level brand compliance gates, and email-security (DMARC) and cloud-security auditing tools.

SKILLS & TOOLS

AI/ML Engineering: RAG (design and migration), agentic workflows / agentic flows, multi-agent orchestration, AI pipelines, open-model fine-tuning, LoRA training (SDXL, PEFT / diffusers) and custom model weights, custom-model training, computer vision, prompt engineering, human-in-the-loop design, LangChain, llama.cpp, on-prem / local GPU inference (PyTorch on Intel Arc XPU)

LLMs & Models: Claude (incl. Claude Desktop), ChatGPT / GPT, Codex, Gemini, Grok, Kimi; open-weight Qwen, Gemma, DeepSeek, GLM

Generative & Creative AI: ComfyUI, Adobe Firefly (Firefly Services API, custom models, video), Google Veo, Gemini image (nano banana), Adobe Express, Photoshop, After Effects, Premiere Pro, Media Encoder, Illustrator, ExtendScript render automation, ffmpeg, voice-clone / lipsync video

Automation & Orchestration: n8n, Hermes (custom agent harness), Grokbot agents, Google Antigravity, Apify, Playwright, Apollo, scheduled agent routines, REST APIs and webhooks, automated GitHub workflows

Programming & Web: Python, TypeScript, JavaScript, SQL, PHP, HTML/CSS, ASP.NET, Adobe ColdFusion, React, Next.js, Astro, three.js, WebGL 2.0, AJAX, Base44

Cloud & Infrastructure: Cloudflare (Workers, Workers AI, R2, D1, KV, Tunnel, Wrangler), AWS (S3), Azure, Google Cloud, Hetzner, Vercel, IIS/Apache, Windows Server, GPU inference servers (multi-GPU, Intel Arc Pro, Apple silicon), Raspberry Pi, networking

Data, Analytics & Security: Data extraction / scraping pipelines, predictive models, revenue and sales dashboards, GIS mapping (Leaflet), CRM integration and de-duplication; HIPAA/FedRAMP-aware architecture, DMARC/SPF/DKIM, ScoutSuite cloud security auditing

Marketing Technology: AI creative production and localization, brand compliance, DAM integration, social scheduling automation, SEO, B2B demand generation, buying-signal capture, LinkedIn/email outreach automation

PROFESSIONAL EXPERIENCE

Dexian | ML Agentic Consultant — *Oct 2026 – Present*

Client: Los Alamos Gardens, cannabis brand CLSICS selling through California dispensaries

- Deployed a **private, on-premises AI platform** on an in-office Apple Mac Studio server with a centralized, access-controlled data store, so staff use AI inside a boundary IT controls.
- Replaced a contractor's complex manual spreadsheet reporting with **scheduled AI agents fed by APIs and real-time data** that deliver reports automatically each morning.
- Built "virtual employees" for the sales manager (CRM reporting, field-data pulls, calendar and programming assistants) and automated **daily field-rep route planning** across dispensary accounts, accounting for traffic, 8-hour shifts and account history (previously a 3–4 day manual task).
- Led enablement: trained revenue and sales leaders to direct their own agents. One sales manager was building his own after ~2.5 hours of training. Built a sales and revenue intelligence dashboard for leadership.

Adobe (via Conexess) | Forward Deployed Engineer, Creative AI — *2026*

- Built a **creative automation system for Nike**, an Adobe client: a Brand Adaptation Engine on Adobe Firefly Services that turns one approved hero image into channel-specific creative (e-commerce, social, digital, retail shelf) across markets, removing the manual layout work behind each campaign. Demo: creative-automation.doug-mckay84.workers.dev
- Engineered brand-safe typesetting from the brand font's own outlines (including Japanese and Korean), subject-aware cropping, a **nine-rule pixel-level compliance gate that never auto-approves**, and DAM integration with write-back of renditions, compliance metadata and lineage. Delivered a 50-brand × 20-market rollout roadmap and ROI model for stakeholders.
- Built a **reusable social-content automation and analytics platform** built for reuse across multiple client companies: a campaign brief produces localized, checked creatives for every product, market and aspect ratio (18 creatives from ≤2 generative calls), Veo video, dated per-channel schedules informed by competitor and own-channel performance, KPI analytics, and S3-mirrored asset libraries. dougmckay.info/assessment

Independent AI Automation Consulting | **Agentic AI Architect** *2026 – Present*

Clients include Cybernet Manufacturing, Premio Inc. and Teguar Computers (medical, industrial and edge-AI computer makers)

- **Cybernet:** Built a 10-stage agentic go-to-market pipeline: rules-based targeting, company scoring, CRM check for new vs. dormant accounts, buying-signal search, decision-maker research (Apollo, Apify, Google, LinkedIn), CEO-approved messaging, **human approval before any outreach**, scheduled sends, reply routing and timed follow-ups. Hosted on Cloudflare Workers for about $5/month.
- **Cybernet Lead Intelligence:** Integrated a lead-enrichment and GIS targeting hub into the company's existing Adobe ColdFusion CRM through REST APIs and webhooks, with de-duplication and per-account playbooks (315 accounts, 12 verticals), so sales works leads in the system it already trusts.
- **Teguar & Premio:** Built AI-generated product catalogues and storefronts (Firefly background removal, scene generation and upscaling; Veo video; Astro on Cloudflare Workers) for edge-AI, machine-vision and medical computing lines. Then ran **paid agentic-AI training for Teguar's marketing and sales departments** so staff run the tools themselves.
- Trained a **custom SDXL LoRA on a local Intel Arc Pro B70 GPU** for cranberry bog, harvest and product imagery, served as a public demo through Cloudflare Workers + Tunnel (about 6–10 s per image, no per-image cloud fees). Demo: cranberry-lora-demo.doug-mckay84.workers.dev
- Trained Firefly custom models on client product photography, driven by my own agent harness (Hermes) as an auditable work queue. Built a plug-in-a-USB-stick product-photography pipeline (auto cutout, cleanup, lighting) that an e-commerce photo team adopted after rejecting two web tools.

Tangent Computer | **Lead AI & Revenue Operations Engineer** *2016 – 2026*

- Built an **AI inventory tool used by Walmart** that turned in-store security-camera footage into data for AI agents, covering sales, inventory and other analytics, and fed it into dashboards.
- Led global B2B marketing and digital automation; built predictive models and autonomous scraping to capture high-intent buying signals. Launched DMARC Director (email-security platform with Firefly/Express-generated scheduled marketing content) and CUBES AI (license and subscription management on a custom-trained compliance model).
- Ran local AI infrastructure for open-weight LLMs and high-throughput data extraction, **cutting third-party compute costs**. Migrated React/Base44 environments to GitHub, AWS and Azure (1,100+ video assets, full API refactor) within 2-week turnarounds, and moved legacy RAG workloads from Hetzner to Google Cloud.

Independent Cloud Platforms & Tech Ventures | **Full-Stack Architect** *2018 – 2023*

- Built and migrated platforms (zincocourtclasses.com, kiderr.com) to Cloudflare Workers/R2; launched Wrapfly.com and Wrap 'nSigns with custom ordering, fulfillment and pricing workflows.

MARKETING LEADERSHIP & FOUNDATIONAL EXPERIENCE

- **Design Space Modular Buildings** | Marketing Director / Full-Stack Developer | 2014 – 2018: Directed marketing and digital campaigns for manufacturing growth and regional visibility.
- **Cybernet Manufacturing** | Marketing Manager & Web Developer | 2009 – 2017: Owned SEO, web design and multimedia content for a B2B technology manufacturer.
- **AT&T Yellow Pages** | Marketing Manager & Web Developer | 2008 – 2018: Promoted to lead the web team's digital campaigns and regional directory deployments; kept client web applications up by resolving server issues.
- **Candid Research** (Full-Stack Developer, 2007); **Cybur Graphics** (Technical Support / Graphic Artist, 2006 – 2007); **Eyetech Digital / Media Answer / PC Extreme** (Network Technician, 1999 – 2007): ASP.NET, IIS/Apache, SQL and POS databases, 100+ network diagrams, support for 80+ workstation sites.

EDUCATION & CERTIFICATIONS

Harvard Business School Online | Agentic AI for Professionals | 2025; **Cypress College** | Network Security & Graphic Arts coursework | 2006 – 2008

Certifications: MCSE; CompTIA A+; W3C: HTML, CSS, JavaScript, SQL, PHP