



Alexander Birger

Hands-On Engineering Leader | AI Architect & Builder | Principal Engineer

Raleigh, NC 919-414-9128 abirger40@gmail.com tizbi.com

Hands-on engineering leader who designs the architecture, writes the code, and runs the production system. 30+ years building software end-to-end — from real-time RF barcode systems on manufacturing floors to HIPAA-grade pharmaceutical platforms to today's Agentic AI stacks. I lead by building, not by delegating.

In 2025–2026 I personally architected and shipped **50+ production systems** in 16 months — data pipelines, multi-tenant portals, RAG over 18,000+ customer calls, algorithmic trading on Kraken, AI-augmented credit analysis, multi-source SEO analytics. Built on a custom AI operating layer (Claude API, Anthropic Agent SDK, MCP, persistent memory, 150+ domain skills, multi-tenant prompt architecture) running on Azure SQL + Python + .NET 10 + TypeScript.

Comfortable as **solo IC, technical lead, or architect-of-record**. I write production code daily, design schemas, debug stored procedures, ship deploy pipelines, and mentor teams — without losing the senior-leader perspective on cost, scope, and business outcome. Looking for a remote senior IC or player-coach role where the bar is shipped systems, not headcount managed.

30+

YEARS HANDS-ON

50+

SYSTEMS SHIPPED
(16MO)

18K+

CALLS AI-INDEXED

150+

PRODUCTION AI SKILLS

10+

STACKS / LANGUAGES

WHAT I BRING

- ✓ Architect, lead developer, and operator — same person, full lifecycle
- ✓ Production RAG over 18,000+ customer calls (Whisper + Claude)
- ✓ Algorithmic crypto trading system (RSI divergence, autonomous position mgmt)
- ✓ HIPAA-compliant pharmaceutical platforms processing 100K+ daily transactions
- ✓ Persistent AI memory + 150-skill operating layer on Claude Code
- ✓ Personally shipped 50+ production systems in 16 months with AI-augmented dev
- ✓ Multi-source data pipeline (5 sources, 39 tables, nightly automation)
- ✓ Multi-tenant master-prompt architecture (DB-stored, GDocs review loop)
- ✓ Real-time RF barcode inventory system — 24/7, thousands of txns/day
- ✓ Cross-database sync (legacy SQL Server 2008 to Azure SQL, 40K+ entries verified)

✓ Patent-pending construction estimation platform (USPTO 18/982,936)

✓ Physics background from elite MIPT program — rigor that shows in code

CURRENT ROLES

Chief Information Officer & Founder

Tizbi, Inc.

1998 - Present | Raleigh, NC

Founded and lead enterprise software development company serving mid-market clients across pharmaceutical, manufacturing, education, real estate, and construction sectors.

- Architect and lead developer on the platform stack — ship production code weekly
- Built **Tizbi Customer Portal** — .NET 10 multi-tenant operations hub
- Designed and shipped **SEO-Kombain** — 39-table analytics pipeline serving 4 companies
- Created multi-tenant master-prompt architecture — per-company AI prompts with reviewer workflow

Chief Information Officer

FlameOFF Coatings, Inc.

2015 - Present | Raleigh, NC

Technology leadership for fire protection coatings manufacturer. Bridges technology strategy with manufacturing operations and direct-to-customer sales.

- Built **HumanData** AI call intelligence — RAG over 18,000+ customer calls
- Integrated **QuickBooks, FedEx, Stripe, Mailjet, SendPulse** APIs into FlameHub commerce platform
- Deployed AI-powered credit application analysis with web research
- Built **CallChecker** — call scoring and sales intelligence pipeline

Both current roles are ongoing. Available for remote senior IC / staff / principal / architect engagements alongside.

AI OPERATING LAYER & PRODUCTION SYSTEMS (2025–2026)

Custom AI Operating Layer Built on Claude Code

Anthropic API / Claude Agent SDK / MCP / Azure SQL

Personally designed and built a production AI operating layer that turned shipped-systems velocity from "team of 10" pace to a single experienced engineer pace.

- **Persistent file-based memory system** — structured user/feedback/project/reference memory across all sessions, indexed and queryable
- **150+ domain skills** — each a self-contained operating manual for a project, client, infrastructure piece, or workflow
- **MCP (Model Context Protocol) integrations** — Gmail, Google Drive, Google Calendar consumed natively by AI agents
- **Multi-tenant master-prompt architecture** — per-company AI prompts in Azure SQL with Google Docs reviewer loop and hard-fail validation
- **Enterprise governance patterns** — centralized TokenStore DB for all API keys, anti-templating rules, "do not modify production data" guardrails
- **Model-agnostic by design** — migrated CallChecker from OpenAI/ChatGPT to Claude with feature parity

Production AI Systems Personally Built (2025–2026):

- **HumanData:** RAG-based call intelligence over 18,000+ customer calls — Whisper transcription + Claude extraction + dashboard
- **CallChecker:** AI call analysis with structured Q&A extraction, scoring, CRM notes generation
- **MoverEstimator:** AI-powered moving cost estimation — 1,326 jobs analyzed, 187 calls transcribed, surfaced 130% cost overrun
- **Content Pipeline v2:** Multi-stage SEO content factory with AI strategic briefs, AJAX generation, Jira integration
- **Conversion Breakage Detector:** 9-rule engine monitoring Google Ads conversion health, auto-journaling anomalies
- **FlameOFF Credit Analyst:** AI credit application processing with web research and risk-tiered recommendations
- **Investor DD Package Builder:** Structured due-diligence orchestration across QB, contracts, cap table, IP
- **SafeVectors:** Quarterly geopolitical security intelligence reports for defense/security clients

RECENT MAJOR PROJECTS (2025–2026)

BOAR SiteWork AI — Patent-Pending Construction Estimation

2025 - Present

BOAR Systems (via Tizbi) | Construction / AI

Architect and lead engineer on AI-powered construction site work estimation platform. Patent filed (USPTO 18/982,936). 9-person team. \$1.5–2M seed fundraising target.

- Architected 5-phase AI Assistant wizard with 62,000-chunk RAG knowledge library
- Built enterprise platform: .NET 10 backend, Nuxt.js frontend, Claude API, Azure SQL
- Designed full site work pipeline: topography to grading, utilities, foundation design
- Hands-on with prompts, RAG retrieval tuning, schema design, deployment, and Estimate-to-Design pipeline integration with John Uhrin's structural Python engine

SEO-Kombain — Multi-Source Analytics Pipeline

2025 - Present

Tizbi, Inc. | Data Engineering / Python / Azure SQL

Comprehensive SEO data platform collecting from 5 sources into 39 Azure SQL tables, with nightly automation serving 4 companies. Built solo end-to-end — from collector design to dashboard.

- Built collectors for Google Search Console, GA4, Google Ads, GTM, and Bing Webmaster (all in Python)
- Created **PageProfile** — unified cross-source view (rankings + engagement + ad spend per page)
- Deployed as PyInstaller executable with 5 Windows scheduled tasks on Azure VM
- Built 9-page TCP portal with Chart.js dashboards, content pipeline, and conversion health monitoring
- Identified \$38K/month revenue excluded from FlameOFF conversion tracking

TradeAssistant & SputnikMonitor — Algorithmic Trading System

2024 - Present

Personal Project | Quantitative Finance / VB.NET / Kraken API

Designed and built algorithmic ETH/USD trading system using RSI divergence detection on Kraken exchange, with autonomous position management. Single-engineer build, end-to-end.

- Built **TradeAssistant** (v3.1) — VB.NET, hourly candle analysis, 4-type divergence detector
- Built **SputnikMonitor** (v1.6) — 24/7 position lifecycle management with take-profit order automation
- Implemented single-pass O(n) divergence algorithm with 14-candle RSI lookback, peak/valley alignment
- Full Azure SQL audit trail (TACandle, TAOOrder, TADivergence, TAPosition, TADirective tables)
- Deployed on Azure VM with Kraken REST API + HMAC-SHA256 authentication
- Migrated from CoinCatch futures to Kraken spot (Jan 2026); .NET 10.0 upgrade (Dec 2025)

Tizbi Customer Portal (TCP) — Multi-Tenant Operations Hub

2025 - Present

Tizbi, Inc. | .NET 10 Razor Pages / Bootstrap 5 / Azure

Architected, built, and deployed multi-tenant operations portal hosting 10+ sub-applications with database-driven access control. I personally write the controllers, the SPs, and the deployment pipeline.

- Built on .NET 10 Razor Pages with Bootstrap 5, deployed on Azure VM (IIS out-of-process)
- Database-driven access control: TCPCard table defines sections, zero code changes to add new modules
- Hosts CSSF Dashboard, SEO-Kombain, CallChecker, MoverEstimator, TimePortal, PureGreen portals
- Comprehensive error logging (TCPLog), singleton ErrorLogService, try-catch on every endpoint
- Apr 2026: shipped v1.9.1–v1.9.4 in a single day — data-accuracy fixes, centralized token store, multi-tenant master-prompt architecture

NewMind Education Platform — Operations Portal

2025 - Present

NewMind Education (via Tizbi) | EdTech / Student Services

Lead architect and primary committer for student services operations portal — 1,650+ accounts in production. Continuous-delivery cadence: shipped v2.10 through v2.14 in April 2026 alone.

- Designed roles & permissions model (Manager Role launch v2.10.3) with assigned-manager hierarchy
- Hardened against bot probes via framework-level Application_Error filter (24 path patterns + raw-IP host detection)
- Built agency type / city filters, account-status workflows, expanded note taxonomy with idempotent migration scripts
- Continuous-delivery cadence: bundled tickets to staging, QA cycle, prod promote with git tags — I run all of this myself

Tizbi TimePortal — Cross-Database Time Tracking Platform

2025 - Present

Tizbi, Inc. | .NET / SQL Server 2008 + Azure SQL / Jira API

Built from scratch on a legacy Hobbit2 SQL Server 2008 database while bridging to a modern Azure SQL replica. 24 production releases (v1.24.0). Two daily-use surfaces: PM Dashboard and Employee Zone.

- Designed cross-database sync architecture: Hobbit2 (SQL 2008, on-prem) → Azure SQL, hourly via Windows Scheduled Task with TPLog health monitoring
- Verified **40,145 time entries** matching after sync hardening (v2 stored procedures with IF NOT EXISTS guards)
- Worked around SQL 2008 limitations: FOR XML PATH instead of STRING_AGG, OPENQUERY empty-string→NULL edge case fixes
- Integrated Jira API via custom **JiraSyncLite** service — project, task, and member metadata sync with AccountId resolution
- Public **TimeConnector ASMX endpoint** enables remote queries without VPN; fully-qualified table references across linked servers

HumanData — AI Call Intelligence over 18,000+ Customer Calls

2025 - Present

FlameOFF Coatings | RAG / Whisper / Claude API

Production AI call intelligence platform that turns every inbound FlameOFF customer call into structured, queryable intelligence. Replaced manual call review — 18K calls is months of human listening.

- Whisper-based transcription pipeline ingesting CallRail recordings into normalized CallRailMeta store
- Claude-based extraction agents pulling structured insights: intent, products mentioned, objections, follow-ups needed
- RAG retrieval layer over **18,000+ indexed calls** — natural-language queries answer "what are customers asking about firestop?" in seconds
- Live dashboard at /tcp/HumanData/Dashboard inside the Tizbi Customer Portal

CLOUD INFRASTRUCTURE & DATA PIPELINES

Azure VM & SQL Architecture — Built and Operated Solo

2025 - Present

Tizbi, Inc. | DevOps / SRE

- Manage Azure VM (TIMEMGMT) hosting 7+ applications: TCP, TimePortal, TradeAssistant, SEO collectors
- Dual Azure SQL databases: TimeTracking (500+ tables) + TizbiOffice (200+ tables)
- Built blob-based deployment pipeline: local build, zip, upload, SAS URL, PowerShell deploy
- 10+ nightly automated pipelines with 100% success rate
- Resolved zombie run-command jam (22 stuck processes); established invoke-only deployment policy

Tizbi / FlameOFF | Data Engineering / Python / .NET

- **Carolina Sweepers:** Service Fusion API sync to 18 CSSF_ tables, nightly delta with error logging, plus QuickBooks invoice reconciliation engine
- **FlameOFF QB:** QuickBooks API direct integration — bills, POs, invoices, OAuth2 token rotation, governance rules codified
- **MailScan:** Physical mail digitization pipeline — HP scanner to Google Drive with property compliance tracking
- **SafeVectors:** Quarterly intelligence reports for defense/security client (Fairfax Ukraine Support Operation / LDR Partners) covering ARX, Colonnade, Universalna

EARLIER HANDS-ON EXPERIENCE

Lead Developer & Systems Architect

2000 - Present

TrialCard (via Tizbi) | Pharmaceutical / HIPAA

Lead developer and architect on pharmaceutical sampling and coupon redemption platform. Helped client grow from startup to \$30M business over 6 years. Foundational HIPAA-regulated experience that underpins today's AI work in regulated industries.

- Led team of 15 developers; personally architected and contributed to all 5 major systems
- Built **HIPAA-compliant systems** handling 100K+ daily transactions involving protected health information
- Created Coupon Portal, Reporting Portal, IVR (48 phone lines), Control Panel, Web Services
- Technologies: XML Web Services, VB.NET, ASP.NET, C#, SQL Server, JavaScript

Chief Technology Officer

2012 - 2015

VideoNitch | Video Technology Startup

- Hands-on technical leadership for video technology platform
- Directed product engineering roadmap, architecture, and shipped code alongside the team
- Built and mentored engineering team

IT Consultant — Government & Pharmaceutical

1996 - 1998

NC State Board of Elections | NC ABC Commission | GlaxoSmithKline

- Election management systems for NC State Board of Elections
- Web-based Pricing and Permit System for NC ABC Commission (Bacardi, Seagrams suppliers)
- Sales Force Automation and Pricing System for GlaxoSmithKline

Lead Programmer

1994 - 1998

Nomaco, Inc. | Manufacturing

Four years of intensive manufacturing IT at foam products manufacturer. Built real-time RF barcode inventory system from scratch.

- Designed real-time Radio Frequency Inventory Barcode System — wireless tracking of all inventory movements, production, shipments
- High-performance 24/7 system handling thousands of transactions daily, integrated with MRP for real-time costing
- Technologies: Visual FoxPro, VB4/6, SQL Server, .NET Mobile Framework on LXE scanners

TECHNICAL STACK

AI / LLMS / AGENTIC

Anthropic Claude API OpenAI / GPT-4 API
Claude Agent SDK MCP (Model Context Protocol)
RAG Systems Whisper (Speech-to-Text)
Prompt Engineering Multi-Tenant Prompt Architecture
Persistent AI Memory LLM Tool Use / Function Calling
Agentic AI AI Strategy

LANGUAGES

C# / .NET 10 VB.NET Python TypeScript / JavaScript
PowerShell SQL (T-SQL) HTML / CSS Visual FoxPro

FRAMEWORKS / FRONTEND

ASP.NET Core / Razor Pages Nuxt.js / Vue Bootstrap 5

CLOUD & INFRASTRUCTURE

Azure VMs / IIS Azure SQL Administration

Chart.js

Web Services / SOAP / REST

PyInstaller

Azure Blob Storage

Windows Scheduled Tasks

CI/CD (Blob Deploy Pipeline)

Multi-Database Sync

OAuth2 / Token Rotation

Cloud Architecture

DATA & STORAGE

SQL Server (2008→2022)

Azure SQL

Stored Procedures / T-SQL Tuning

Cross-DB Sync

Schema Design

Vector / RAG Indexing

APIS & INTEGRATIONS

Google (GSC, GA4, Ads, GTM, Gmail, Drive)

QuickBooks API (OAuth2)

Kraken Exchange API (HMAC)

FedEx API

Jira REST API

Service Fusion API

Stripe / Mailjet / SendPulse

PRACTICES

HIPAA Compliance

Real-Time Systems

Distributed Pipelines

Continuous Delivery

Idempotent Migrations

Production Observability

Architecture Reviews

Code Reviews / Mentoring

DOMAIN

Algorithmic Trading (RSI Divergence)

SEO / Marketing Analytics

E-commerce / B2B Commerce

EdTech / Student Services

Construction Estimation

Manufacturing IT

Pharmaceutical IT

Real Estate / PropTech

INDUSTRIES WORKED IN

Pharmaceutical

Manufacturing

Government

Education (K-12 / EdTech)

Scientific / Research

Fire Protection / Industrial Coatings

Video / Media

Real Estate / Property Management

Construction / Concrete

Moving Industry

Water Treatment / Industrial

Security Intelligence

B2B Commerce / SAP

Immigration Law

Quantitative Finance / Crypto

Nonprofit / NGO

Health & Fitness Platforms

EDUCATION

Master of Science in Physics

Moscow Institute of Physics and Technology (MIPT)

One of Russia's most selective technical universities, often compared to MIT. Rigorous program combining advanced physics with applied mathematics and computational methods.

Additional Studies

North Carolina State University

Continued education in computer science and business applications.

HOW I WORK

"I lead by building."

After 30+ years in software, my keyboard is still the main tool. I architect the system, write the production code, design the schema, ship the deploy pipeline, and operate the result. CIO experience taught me cost, scope, and trade-off discipline; staying hands-on keeps me honest about whether the design will actually work.

In 2025–2026 I built a custom AI operating layer around Claude Code — persistent memory, 150+ domain skills, MCP integrations, multi-tenant master-prompt architecture — and used it to personally ship 50+ production systems in 16 months

across 20+ active clients. Pace that would have required a team of 10 just two years ago. The lesson is not that AI replaces engineers. The lesson is what a deeply experienced builder can do when AI is wired into the same operating system the work lives in.

Looking for a remote role where shipped systems are the bar, async output is respected, and I can lead by example — not by org chart.