

Tizbi — Completed IT & AI Project Portfolio

Selected work led by Alexander “Sasha” Birger, CIO & Founder, Tizbi, Inc.

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Tizbi has shipped software for mid-market and enterprise clients across pharmaceuticals, manufacturing, construction, education, B2B commerce, real estate, water treatment, and call-center operations since 1998. Through 2025–2026 we re-platformed our delivery model on a custom AI operating layer (Anthropic Claude API, Agent SDK, MCP, persistent memory, 150+ domain skills, multi-tenant prompt architecture) and shipped **50+ production systems in 16 months.**

Highlighted below are 40+ representative projects across industries. **AI-flavored systems are foregrounded** and marked with the blue rail. *Client names are redacted where engagements are confidential*; only the final section (drawn from Tizbi's publicly-listed case studies) and a few historical references are named explicitly.

28+

YEARS IN BUSINESS

400+

PROJECTS DELIVERED

50+

AI SYSTEMS SHIPPED
(16MO)

80+

TEAM MEMBERS

99%

CLIENT SATISFACTION

Saxila AI / MoverEstimator — Natural-Language Data Interface AI

Saxila AI (productized) · Sacramento-area moving-company design partner · Live in production · Pitch competition track

A “Human Language” analytics interface: an operator asks a question in plain English, Claude generates SQL against a documented schema, executes it, and interprets the result with a confidence score. Schema understanding lives in 158 database-stored description rows — new tables become queryable with zero code changes. Runs over a normalized 18-table model (1,326 jobs, 1,233 customers, 1,659 cash-flow transactions); paired with a Whisper + Claude call-extraction pipeline and bilingual cash-flow analytics. Productized into Saxila AI with live website and accepted into the F6S Pitch Elk Grove 2026 startup competition.

Stack: Claude API, .NET 10 Razor Pages, Azure SQL, Whisper STT, Python ETL

Call Intelligence RAG over 18,000+ Customer Calls AI

Long-standing manufacturing client · Live in production · 11 daily users

Production AI system that answers business questions over every inbound customer call — “RAG without vectors”: pure SQL retrieval plus Claude, no GPU, no model training. Dual-strategy engine: preset keyword classification, plus a “smart” mode where Claude reads the full schema, generates a targeted SQL query with a JOIN plan, executes it, and interprets the result. Operates over a 490,000+ record call-metadata store covering 18,000+ unique calls and 27 metadata codes; direct-SQL mode classified a full 12-month population (5,077 calls × 11 codes) in under 60 seconds at roughly \$0.10–0.30 per query.

Stack: Claude API, Azure SQL, .NET Razor Pages, SQL-injection sanitization on model-generated clauses

Conversational Engineering Design Platform AI

Tizbi R&D + enterprise construction-engineering client · Research / innovation track

Research-stage product that takes natural-language design intent from a structural engineer and produces verified 3D engineering geometry — with built-in verification rules, design code checks, and quality gates. Working prototypes have demonstrated a new conversational pattern for AI-assisted CAD: replacing point-and-click drafting with intent-driven generation, then validating the result against engineering rules before it ships. *Internal architecture & IP details withheld pending patent filing.*

Demonstrates: AI-assisted CAD, rules-based verification, multi-agent guardrails, agentic design workflows

SEO-Kombain — Multi-Source AI Analytics Platform AI

Tizbi internal + 3 enterprise clients (manufacturing, outdoor-platform startup, industrial services) · Production · 4 tenants

Multi-tenant data platform that collects from 5 marketing APIs (Google Search Console, GA4, Google Ads, GTM, Bing Webmaster) into 36 Azure SQL tables, with AI features layered on top. Cross-source PageProfile view links organic rankings + paid spend + traffic + conversions per page. AI “Ideas” feature calls Claude with RAG-enriched prompts; content pipeline produces AI-drafted strategic briefs; a 9-rule conversion-health detector flags broken Google Ads conversion tracking. Multi-tenant master prompts in Azure SQL with hard-fail validation (hardened after a cross-tenant leak incident).

Stack: Python collectors (PyInstaller EXE), .NET 10 Razor Pages, Azure SQL, Google APIs, Bing API, Claude API

CallCheckers — AI Call Analysis & Scoring AI

Manufacturing client · Production · 1,693+ calls/month

AI call-review system that turns recorded sales calls into structured Q&A data and scorecards. Extracts 29 database-driven questions per call, plus meta outputs (CRM notes, follow-up email draft, account-rep coaching scorecard) using Claude Sonnet. 17,160+ calls processed; 378,917 attributes extracted. v1 in production (VB.NET, legacy on-prem); v2 (Python, Azure-to-Azure) tested and ready. Model-agnostic design enabled a clean migration from OpenAI to Claude with feature parity.

Stack: VB.NET / Python, Claude Sonnet 4, Azure SQL, SOAP integration service

Sellnetics — Multi-Tenant CRM with AI Email Agents AI

Tizbi internal + manufacturing client deployment · Production · 43,000+ contacts · 4 agents

Multi-tenant CRM platform running two isolated production deployments — a Tizbi-internal contact/lead system and a marketing instance for a manufacturing client with 43,000+ rural contacts (architects, building officials, contractors). Four AI email agents run daily: BuildingOfficialFollowUp, ArchitectFollowUp, ProspectFollowUp, InactiveCustomersFollowUp. Each agent uses Claude Sonnet 4.6, a database-stored prompt-template system, per-run logging, and a reviewer loop. CRM sync, webhook ingestion, and bi-directional hooks into call-tracking and contact-management platforms.

Stack: .NET Web API, Azure SQL (dual backends), Claude Sonnet 4.6, Python agent runners

Architect Search — Autonomous Lead-Discovery Agent AI

Tizbi (manufacturing client go-to-market) · Production · Unattended

Autonomous discovery agent that runs unattended on a schedule — one city per hour, Claude + web-search tool discovers architecture firms, scrapes team pages, classifies leads into quality tiers, dedups against an existing database, and pushes new records to a CRM API. Scale to date: **8,789 architects and 1,571 firms** discovered across 900+ cities. Runs unattended at roughly \$48–165/month in API cost.

Stack: Python, Claude Sonnet + Haiku, web search tool, Azure SQL, Windows scheduled tasks

AI Credit-Application Analyst AI

Manufacturing client · Production

End-to-end AI workflow that takes a new customer's credit application from the inbox to a risk recommendation. Pulls PDF applications from Gmail, parses applicant identity, performs web research, drafts reference-check emails, tracks responses, and produces a risk assessment with recommendation routed to the CFO. Replaces what was previously several hours of manual due diligence per applicant.

Stack: Python, Claude API, Gmail API, web search, QuickBooks API

Email Monitoring & Triage Agent AI

Tizbi internal · Development

Reusable email-analysis service that scans Gmail for unreplied threads, identifies action items, distinguishes To vs CC, ignores already-handled threads, filters newsletters/security alerts/cold outreach, and ranks correspondents by an importance score. A correspondent table tracks the operator's network with engagement levels (0–100). Hardened after a v1 baseline that scored 0/19; v2 rule-set added explicit name-mention and request-pattern detection.

Stack: Python, Gmail API, Claude API, Azure SQL

AI Operating Layer — The Platform Behind 50+ Shipped Systems AI

Tizbi internal · Cross-client · Production

Custom AI operating layer built on Claude that turned Tizbi's shipped-systems velocity from team pace to a single-architect pace. Five components: **persistent file-based memory** (structured user / feedback / project / reference memory across all sessions); **150+ domain skills** (self-contained operating manuals for each client, project, infrastructure component, and workflow); **MCP (Model Context Protocol) integrations** for Gmail / Drive / Calendar; **multi-tenant master-prompt architecture** (per-company prompts in Azure SQL with reviewer loop + hard-fail validation); and a **multi-agent development workflow** orchestrating OpenAI Codex and Claude Code as co-developers with rotating builder/reviewer roles and cross-agent code review.

Stack: Anthropic Claude API, Agent SDK, MCP, OpenAI Codex, Azure SQL, centralized TokenStore

Agentic-System Guardrails — Adversarially-Hardened Validation Gate AI

Tizbi R&D · Production-stage

Rules-based validation gate that sits between an AI agent proposing structured actions and the system executing them. Three-way contract: accept, reject with reasons and alternatives, or flag the unknown and log the gap. Hardened through adversarial red-team campaigns where an AI agent submits batches of deliberately-invalid actions and every false-accept becomes a logged rule to close. A campaign caught a fail-OPEN exemption (unknown / spoofed input getting an unbounded pass) and re-architected it fail-closed; 169 unit tests with full regression clean.

Stack: .NET, Claude API, multi-agent development (Codex + Claude Code)

Content Pipeline — AI Content Production Line AI

Tizbi internal + 2 enterprise clients · Production

AJAX-driven content factory: sprint-builder wizard, AI strategic briefs with deliverables, topic research, keyword mapping, internal linking, AI drafts via Claude's 4-level thinking mode, Google Drive publish, Jira integration, and full versioning with per-version notes and rollback. Producing 15+ article versions per sprint across three companies; used in production for the Tizbi marketing site and a manufacturing-client blog.

Stack: Claude API, Python markdown generation, Google Drive API, Jira API, .NET backend

B2B COMMERCE, E-COMMERCE & OPERATIONS

B2B Mobile Commerce with AI Photo-to-Order AI

Major Saudi Arabian B2B food wholesaler (\$18M+, scaling 20,000 → 50,000 customers) · Phased rollout in flight

Bilingual (Arabic + English) iOS/Android mobile ordering app for a Saudi food wholesaler. Core innovation: AI photo-to-shelf recognition — store owners photograph their shelves, Claude Vision identifies products and quantities, and the app auto-fills the reorder. Backend on Tizbi's independent cloud (not SAP-tethered), bridged via the Corevist API layer to the client's SAP S/4HANA ERP. Phased rollout: live zero-API version now, then real-time SAP data, then planogram compliance + WhatsApp AI ordering.

Stack: Flutter, .NET backend, Azure SQL, Claude Vision API, SAP integration via Corevist middleware

Order Management & E-Commerce Platform

Long-standing manufacturing client · Production · 9-product portfolio

Full e-commerce + order management platform with multi-currency, multi-region orders. Integrates with QuickBooks (PO API), Stripe (payments), FedEx (Ground + Freight), Mailjet (transactional email), SendPulse (subscribers), Copper CRM, and CallRail. 83-table Azure SQL backend with 36 cron jobs managing integrations. Real-time inventory, FBA-pattern shipping, full audit trail across the order lifecycle.

Stack: Python/Flask, Vue.js 2.6, Azure SQL, 6+ third-party integrations, Linode hosting

Service Fusion Sync & Operations Dashboard

Industrial sweeper-services operator · Production

Daily sync from Service Fusion (industry CRM) into Azure SQL, powering an operational dashboard with customer summary, KPIs, estimates pipeline, invoice aging, and job-status views. Resolves a long-standing reporting gap where Service Fusion's native reports could not answer cross-cutting questions. 1,000+ customers, 5,000+ jobs tracked.

Stack: Service Fusion API, Azure SQL, .NET 10 Razor Pages (TCP-hosted dashboard)

Subcontractor Invoice Automation

Manufacturing client (third-party vendor invoicing) · Production · 62+ bills/month

Fully automated invoice pipeline: Gmail scan → PDF parse → PO match → QuickBooks bill creation → PDF attachment. Reads a dedicated accounting inbox via OAuth, extracts PO + invoice numbers from the email subject, downloads the attachment, validates the PO in QuickBooks, creates the bill, and attaches the PDF. ~\$27K+ processed through Q1 2026. Resilient to sender-domain pivots and Gmail auto-trash edge cases; daily OAuth token health-check watchdog.

Stack: Python, Gmail API (TokenStore), QuickBooks API, pyodbc, pdfplumber

AI Gear Inventory & Marketplace Platform

Founder-led outdoor-enthusiast startup · Live marketing site, app in development

Inventory + marketplace platform for outdoor enthusiasts (gun owners, hunters, preppers, anglers). Mobile-first UI with 5 AI "coaches" (Range Coach, Prep Coach, Hunt & Fish Coach, Asset Manager) and signature features: photo-recognition SNAP-to-Add, ammunition assistant, and AI valuation / monetization tooling (proprietary). Tizbi delivered the live marketing site (36 pages, 15 blog posts) and the deployment CI/CD pipeline.

Stack: HTML/CSS/JS marketing site, Azure IIS, generative-AI imagery, GitHub CI/CD

Firestop Product-Line Distribution Partnership

Manufacturing client × German firestop manufacturer · Q1 2026 launch

Tizbi coordinated a private-label distribution arrangement for 5 German firestop SKUs (plug, block, foam, sealant, collar) under a signed MOU. Delivered: competitive pricing analysis (MSRP positioning vs. Hilti and other incumbents), UL Multiple Listing paperwork (filed Feb 2026), competitive intelligence (key US-market threat assessment), and a Jira epic running the launch.

Stack: Market research, PDF generation, Jira orchestration, logistics planning

INDUSTRIAL, ENGINEERING & CONSTRUCTION

Water-Treatment SCADA & AI Monitoring

Vancouver-area agritech / water-treatment client · Bid won April 2026 (\$241K–\$296K) · Contracting stage

Two-tier monitoring architecture for a 10-reactor ammonia-inversion + recovery plant that converts livestock manure into soluble fertilizer. Tier 1: local PLC + HMI for real-time control and safety interlocks. Tier 2: Azure cloud SCADA for remote analytics and AI-driven process optimization. Tizbi handles full hardware build (Allen-Bradley CompactLogix PLC, 36+ RS-485 sensors for pH/DO/EC/NH3/NO3) plus lab validation; client installs on-site. 6–8 month phased delivery.

Stack: PLC ladder logic, OPC UA, .NET, Azure SQL, ASP.NET Razor Pages (13 dashboard screens)

Real-Time RF Inventory System (Nomaco)

Nomaco, Inc. — foam-products manufacturer · 24/7 production system (historical, named publicly on Sasha's resume)

Radio-Frequency barcode inventory system running 24/7 in a foam-products manufacturing plant, integrated with the MRP system for real-time costing. Thousands of transactions daily; the original Tizbi-built reference deployment for real-time manufacturing operations.

Stack: RF barcode, MRP integration, real-time data capture

EDUCATION

International Student Recruitment Operations Portal

International student-recruitment SaaS client · Production · Wave 2 deployed May 30, 2026

B2B SaaS managing international student recruitment, applications, admissions tracking, and agency commissions. Multi-role RBAC (Super Admin, Manager, Sales Rep, Agent) with team-scoped access for managers. Workflows: application pipeline, commission calculation and payment tracking, Jira integration. Phase 1a (student management) live; Phase 1b (commissions) in progress; Phase 2 (advisor role) and Phase 3 (program applications, new Azure subscription) planned.

Stack: ASP.NET MVC 5, .NET Framework 4.8, Azure SQL, dedicated Azure VM, Azure Communication Services

Gamified Concrete-Industry LMS Migration

State concrete-industry association + national career academy · Migration in progress

Migration of a state concrete-industry association from legacy PathLMS to Tizbi's in-house vPortal, with a new gamified brand (levels, achievement badges, difficulty ratings) targeting high-school students → ACI (American Concrete Institute) certified pros. 44 CIP modules + 11 ACI Flatwork sections + Spanish + quizzes = 150+ assets. vPortal supports 1,000+ users, SCORM, SSO, multilingual. National reach (no licensing restrictions); the association trains ~1,000 concrete pros/year.

Stack: vPortal (Tizbi LMS), Azure SQL, SCORM, video streaming, SSO

ALGORITHMIC TRADING & QUANTITATIVE SYSTEMS

SputnikGrid — VWAP/STDEV Crypto Trading System AI

Algorithmic-trading partner · Live backtest portal, May 2026

Next-generation backtesting and live engine for algorithmic Ethereum futures trading, replacing the legacy single-TP/SL model with a dynamic 4-tranche grid anchored to VWAP and volume-weighted standard deviation. Entry on RSI divergence with EMA filter; exits scale as volatility shifts. Backtests across 7 profitable years (2018–2025, including two bear markets) showing 57% CAGR after a look-ahead-bias correction (May 15). Portal hosts equity curves, candlestick overlays, and divergence visualization; 38 unit tests + 42 partner-validated test runs.

Stack: C# .NET 10, Razor Pages, Chart.js, SQL Server, 910K Ethereum 5-min candles (2017–present), Binance Futures API

TradeAssistant / SputnikMonitor (Legacy)

Internal R&D · Legacy, drove SputnikGrid redesign

Original Kraken spot-ETH trading system using a 5-tier cancel-replace take-profit grid with time-aggression (24–72h) and HOLD / FREEZE / NORMAL market-state zones. Surfaced the weak points that drove the SputnikGrid redesign (no hard stop-loss, rigid single-TP grid).

Stack: VB.NET, Kraken API, SQL Server

MARKETING, LEAD GENERATION & OUTREACH

DACH-Region B2B Lead Research

B2B lead-research consultancy (DACH region) · Sprint 2 complete, Feb 2026

Lead research engagement covering 5 Austrian cities (Vienna, Salzburg, Graz, Innsbruck, Linz) for craft-brewery decision-makers. Delivered 61 enriched leads with personal emails (45–54% coverage) and LinkedIn profiles. Differentiator: scraping the Austrian *Impressum* page (legally-required company contact) + business-registry data + email-pattern detection — rather than generic contact forms. Output: JSON + CSV + styled HTML reports per city.

Stack: Web scraping, WHOIS, LinkedIn enrichment, Python, JSON/CSV/HTML export

Investor Due-Diligence Package Builder AI

Manufacturing client (private investor track) · Production

AI-assisted investor due-diligence package builder. Aggregates financials, gross margins, large contract analysis, customer concentration, cap-table, IP/defensibility analysis, and a defensible valuation model into a single coherent investor-ready package. Replaces what was previously weeks of manual financial and strategic analysis.

Stack: Python, Claude API, Google Sheets / Drive, QuickBooks API, PDF generation

MailScan — Paper Mail Digitization & Database Sync

Tizbi internal · Operations support · Production

Scanned-paper-mail pipeline: scanner → incoming/ folder → read → categorize across 10 types (Insurance, Mortgage, Tax, Legal, Medical, Auto, Utilities, Tolls, Banking, etc.) → multi-letter PDF split → Google Drive upload → Azure SQL sync against the operations database. 68 files indexed across 10 categories in the first session; ongoing operational use.

Stack: Python, pypdf, Google Drive API, Azure SQL, NAPS2 scanning

INTERNAL PLATFORM & INFRASTRUCTURE

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

Tizbi internal & client-facing · Production · 11+ apps hosted

.NET 10 Razor Pages multi-tenant portal that hosts the customer-facing pages for the Call Intelligence RAG, MoverEstimator, CallChecker, SEO-Kombain dashboards, the industrial sweeper-services dashboard, and more. Database-driven access control via a card model: new modules add with zero code changes. Centralized error logging, an 8-rule programming-standards regime, and self-contained single-file deployment as an IIS application. Least-privilege SQL users per service.

Stack: .NET 10 Razor Pages, Bootstrap 5, Azure SQL, ADO.NET, IIS

TimePortal & Legacy ↔ Cloud Sync

Tizbi internal · 80+ team · Production · 40,000+ entries verified

Enterprise time-tracking platform with a cross-database sync architecture: legacy on-prem SQL Server 2008 to Azure SQL, 4× daily, with a 9-point health-check diagnostic. Custom Jira metadata-sync service via JiraSynclite. Multi-vendor import tooling. Works around SQL 2008 limits (FOR XML PATH, OPENQUERY edge cases). One Azure VM operates 7+ Tizbi applications including this platform.

Stack: ASP.NET Web Forms, C#, SQL Server 2008 + Azure SQL, Windows Task Scheduler, Jira REST API

SECURITY & INTELLIGENCE REPORTING

Quarterly Security Intelligence Reports

Private investor group (Eastern European portfolio companies) · Quarterly cadence

Quarterly geopolitical and security intelligence reports on an Eastern European security operation. 5,500–8,000 words per report: BLUF (Bottom Line Up Front), 15–17 Intel items (battlefield dynamics, weapons, diplomacy, sanctions, energy, US/China policy), multi-perspective Challenges & Concerns, portfolio-company updates, and a strategic Final Thoughts section. Mandatory fact-checking pipeline (quote verification, date confirmation, running-metric consistency). Q1 2026 delivered; multiple prior quarters completed.

Stack: Web search synthesis, Claude API, quote verification, DOCX/HTML/PDF generation

HEALTHCARE & PHARMACEUTICALS

TrialCard — HIPAA-Grade Pharmaceutical Platform

TrialCard (via Tizbi) · 2000–Present · Helped client grow from startup to \$30M+ business · *Named publicly on Sasha's resume*

Lead developer and architect on a pharmaceutical sampling and coupon-redemption platform. HIPAA-compliant systems handling **100,000+ daily transactions** involving protected health information. Led a team of 15 developers; architected and contributed to all 5 major systems — Coupon Portal, Reporting Portal, IVR (48 phone lines), Control Panel, and Web Services. The reference deployment for Tizbi's regulated-data engineering practice.

Stack: XML Web Services, VB.NET, ASP.NET, C#, SQL Server

SoundPure

[SoundPure \(boutique musical instrument retailer\)](#) · Completed

E-commerce platform integrated with the Reverb marketplace API, supporting Tizbi's flagship retail client base. Cross-channel inventory and order synchronization.

Firenetics

[Firenetics](#) · Completed

Custom Revit BIM plugins for fire-rating analysis in architectural design. Embedded directly inside the architect's BIM workflow.

SASR Workforce Solutions

[SASR Workforce Solutions](#) · Completed

Modernization of an enterprise workforce-management system. Migration from legacy stack to a maintainable, scalable platform.

ShiftWizard

[ShiftWizard \(healthcare\)](#) · Completed

Healthcare staff scheduling platform with automated CI/CD delivery pipeline.

Vantaca

[Vantaca \(community association management\)](#) · Completed

Community association management platform with workflow automation across HOA operations.

Nutrimatters

[Nutrimatters \(nonprofit / metabolic-fitness platform\)](#) · Completed

Google Ad Grant nonprofit marketing platform and metabolic-fitness initiative.

Paint Applicators · Marketing Automation · School Food Delivery

[Multiple clients](#) · Completed

Android mobile app for industrial paint applicator field operations; automated bidding system for marketing agencies; meal distribution logistics platform for school food delivery.

VideoNitch — CTO

VideoNitch (video technology startup) · 2012–2015

Hands-on technical leadership for a video technology platform — directed the engineering roadmap and architecture, and shipped code alongside the team.

NC State Board of Elections / NC ABC Commission / GlaxoSmithKline

Government & pharma consulting · 1994–1998

Election-management systems for NC State Board of Elections; web-based pricing and permit system for the NC ABC Commission; pharmaceutical sales-force-automation system for GlaxoSmithKline. Built as Lead Programmer / IT Consultant before founding Tizbi.

Tizbi, Inc. · Raleigh, NC · founded 1998 · tizbi.com

Compiled May 30, 2026 for partner review. Confidential client names are redacted throughout. Publicly-listed Tizbi case studies (final section) and historical engagements named on the principal's public resume retain their client names. Personal/family work and pre-publication IP are omitted.