

Tyler Brown

Sales Manager, Innovative Bioscience · commercial systems and applied AI

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I carry a sales number. I build the systems behind it, and some of them are machines.

Sales lead for cell culture reagents and laboratory consumables into research universities, cancer centres and biotechnology companies, and the builder of the commercial systems the sales organisation runs on. **614,000 lines** of JavaScript, Python and shell across twelve production systems, **824 commits** over seven repositories, and **553 test files carrying 5,836 test cases**. In the commit log, fixes outnumber features 224 to 206. Where a result did not hold up, I have said so in writing and withdrawn it. The long version, with the measurement behind every figure, is at atylerbrown.pages.dev.

SELECTED SYSTEMS BUILT

cXML and OCI e-procurement connector. Lets an institutional buyer punch out of their own purchasing platform, shop at contracted prices and return a cart as a purchase order. Seven cXML message types plus SAP OCI, durable outbound queue with dead-lettering, atomic idempotency on order intake.

26,396 lines · 153 files · 94 test files · 9 adversarial security reviews, 40+ findings closed, including an unauthenticated NoSQL injection to session hijack · [live](#)

Literature extraction on local GPU inference. Reads the Methods section of published papers to extract which supplier a lab used, on a 14-billion-parameter model running locally. The model must return a verbatim source span checked as a literal substring, so an unsupported name is discarded rather than reported.

6,537 papers in one 11-hour unattended run, 0 failures · throughput 1.27 to 9.43 papers per minute · P 1.000 / R 0.813 / F1 0.897 on a 24-paper held-out set · \$0 marginal cost

An evaluation-contamination catch on my own work. Measured a prompt revision as a large quality gain, then found the evaluation set had been built out of the previous prompt's own failures. Re-measured on randomly sampled blind-labelled papers, reported the tie, and withdrew the claim.

21/24 · 21/24 no measurable gap · [withdrawn](#)

A seventeen-layer pre-send guard. Not a mail sender. A gate answering whether an address may be contacted right now, with fail-open and fail-closed posture assigned per layer and two independent halts.

172 sends, 0 bounces · all 25 historical hard bounces were unverified addresses, so verification and not volume controls the rate

Marketplace order connector. Signed CloudEvents webhooks over HMAC-SHA256. Verifies fail-closed, persists the raw signed event before acting on it, acknowledges inside the partner's three-second budget, handles money as integer cents, and runs idempotency at both event and effect level.

244 tests across 25 suites · two silent order-loss defects caught before go-live, one of which would have rejected 100% of real orders while returning a plausible response

Live carrier rating at checkout. Rates every cart against a live negotiated carrier contract, bin-packing to measured carton geometry, real stack heights and a 42-pound strap limit, with cold chain forced to next-day. Refuses rather than guesses: no usable rate means no rate returned.

522 item weights · 13 box types · daily config-invariant and rate-battery guards · [live on every order](#)

A six-axis robot that prints buildings. Toolpath planning and machine control for a KUKA KR 210 on a six-metre track. Takes a parametric building model, plans the path inside the arm's reach envelope, solves for where the robot must sit to cover the footprint, and emits executable machine code with pump control.

13,215 lines of G-code across 200 layers · 8,780 m toolpath · 12.2 hour print · 947 mm solved track position inside a 3.1 m reach envelope

Generative media with a control layer. Product photography and video pipelines whose quality gate was measured rather than guessed, and whose label guard fails closed rather than ship something plausible.

discriminator 52 against 90-159 at the 5th percentile · label guard fails closed, 2 of 3 generations rejected · documented limits, including a one-digit phone-number drift at temperature zero

Search, and what the blog was actually doing. A 166-article corpus carrying 72.6% of all site impressions that converted at 0.47%. Measured the cause: the corpus is read, not clicked. Ruled out a title rewrite and an on-page tool on data, then rebuilt the conversion path with a changeset engine that edits live pages against live anchors and writes a rollback file before any write.

19,497 impressions at position 6.7, [0.37% click-through](#) · 31/31 then 11/11 operations verified live · 35 links 2xx · citation audit resolved 178 identifiers, found 6 dead links and 47 misattributions

Extraction at scale. Browser automation with fingerprint rotation, per-domain adaptive backoff behind a circuit breaker, and eight confidence-ranked extraction strategies with de-obfuscation for HTML entities, reversed strings, ROT13 and JavaScript concatenation. Decode, never guess.

48,810 lines, 79 institution runners · one vein: 1,014 published addresses from 1,198 pages, 0 duplicates, 0 provenance gaps · found [92% of guessed addresses wrong](#) where the school issues opaque IDs

Also built. A machine-readable catalogue surface for AI buyers, trimmed from 467,503 characters of chrome to 6,289, with 518 of 518 metadata writes applied in 90 seconds; a Pinecone retrieval platform and the falsifiable benchmark that caught my own inflated figure; a nightly evaluation harness whose thresholds had never been calibrated, recalibrated so 67 of 100 pass; 39 agent definitions over a written protocol carrying 279 tests; risk-classified tool servers refusing sends and billing outright; a zero-dependency internal platform behind single sign-on; buyer identification from 13,459 federal awards into 2,212 qualified records; bot detection finding 8,666 of 14,060 analytics sessions automated; and finance automation that will not write a cell until closed months reproduce to the cent.

EXPERIENCE

Sales Manager, Innovative Bioscience

JANUARY 2024 – PRESENT · LAS VEGAS VALLEY, NEVADA

- Sales lead for cell culture reagents, consumables and nitrile gloves into research universities, cancer centres, biotechnology companies and manufacturing facilities.
- Designed, built and deployed the e-procurement integration that lets institutional buyers purchase inside their existing purchasing platforms, owning both the technical integration and the supplier-enablement conversation.
- Consolidated CRM, quoting, price sheets, order history and accounting into one reporting layer, replacing five systems that disagreed with one another.
- Built the quoting and price sheet engines the team uses daily, ran a multi-state sales tax exposure review, wrote the sales training programme, and administer the Microsoft 365 tenant and identity estate.

President, SunNSee.com

JUNE 2019 – NOVEMBER 2023 · UNITED STATES

Founded and ran an e-commerce and equipment business serving ophthalmic and optometric practices nationwide. Started alongside the Lombart territory and went full time in 2020.

- Ran the storefront, supplier relationships and nationwide fulfilment, and refurbished and resold optical edgers into private practices with the demonstration, installation and training done myself.
- Produced every piece of marketing content the business ran, including product photography, video and aerial drone work. No agency, no contractor.
- Built an inventory tracking system to streamline fulfilment. It was the first commercial software I wrote against my own profit and loss, and the reason I now build the systems rather than buy them.

Regional Sales Manager, Lombart Instrument (Advancing Eyecare)

OCTOBER 2018 – AUGUST 2020 · NEVADA AND UTAH

- Managed a **\$1.8 million annual sales pipeline** across diagnostic and surgical ophthalmic systems including optical coherence tomography, corneal topographers, YAG lasers and auto-refractors.
- Ranked in the top tier of the sales force and named Top Regional Sales Performer in 2019.
- Ran the capital-equipment buying process end to end: return-on-investment modelling, leasing programmes, and multi-stakeholder approval across surgeons, operating-room staff, administrators and purchasing. The same committee I sell to today.

Ophthalmic Technician, private practice

2014 – 2017 · NEVADA

Performed pre-operative and post-operative testing for LASIK and cataract procedures, calibrated the diagnostic instruments and counselled patients through their results. I had run the devices in a clinic before I ever demonstrated one to a surgeon.

Optician, Eyes on Las Vegas

2011 – 2015 · LAS VEGAS, NEVADA

Dispensing optician: fitted and adjusted eyewear and cut and edged lenses to prescription, while completing the ophthalmic laboratory technology degree. I was making the lenses before I ran the diagnostic equipment, sold it, or built the software.

TECHNICAL

Models	Qwen3-14B · Qwen3-8B · Gemini 2.5 Flash · Gemini 3 Pro Image · Claude · WhisperX large-v3 · Veo 3.1
AI stack orchestration	Ollama · GGUF quantization · Pinecone · RAG · MCP servers · LLM-as-judge · span grounding · agent
Build	Node.js · Python · Bash · SQL · Liquid · Docker · Jest · Playwright · Puppeteer
Data	MongoDB · SQLite · PostgreSQL · Litestream · Cloudflare R2
Infra	Cloudflare Workers, Access and Pages · Railway · Tailscale · OAuth 2.0 · JWT and JWKS
Protocol	cXML 1.2 · SAP OCI · CloudEvents · HMAC-SHA256 · GraphQL · REST · G-code · DMARC and DKIM
Machine aerial capture	AutoCAD · CadQuery · KUKA KR 210 · STEP and STL · Blender · OpenFOAM · Remotion · ffmpeg · drone
Platform	Shopify Admin and CarrierService · QuickBooks Online · Microsoft Graph and 365 · GoHighLevel · Salesforce · HubSpot · GA4
Science	NIH RePORTER · PubMed and PMC · NCBI E-utilities · Crossref · OpenAlex · eCFR API · FDA Data Dashboard
Regulated	21 CFR Part 11 · 21 CFR 211 · NEC, IPC and IMC · UNSPSC · multi-state sales tax nexus
Practice	Test-driven development · adversarial and red-team review · measurement and evaluation design · fail-closed safety architecture

EDUCATION

College of Southern Nevada · Associate of Science, Ophthalmic Laboratory Technology · 2011 – 2013

Front Range Community College · Applied Science, Mechanical Engineering · 2009 – 2011