

ZACHARY "ZAK" LYONS

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SUMMARY

Senior full-stack engineer with 7+ years shipping Django and React/TypeScript products end-to-end. Solo-built an autonomous AI agent platform on Django/Python and React/TypeScript with Postgres + pgvector, Celery, Redis, and Docker. Production Django experience in regulated domains: crisis telehealth in active ERs, federal ICHRA compliance, and post-acquisition healthcare integration. I own backend, frontend, infra, and integrations under ambiguity, and I mentor other engineers along the way.

CURRENT PROJECTS

Founder / Builder - Kaelbot.com

Autonomous AI career operator | Austin, TX | Present

- Solo full-stack ownership: Django/Python backend, React/TypeScript frontend, PostgreSQL with pgvector for semantic memory, Celery for background jobs, Redis, and Docker.
- Implemented LLM tool-calling orchestration against 25+ structured tools the agent invokes itself (lead creation, resume tailoring, cover-letter generation, dossier synthesis, artifact storage, preference clustering).
- Architected per-user persistent memory and preference learning so the agent retains durable facts across sessions, supersedes corrected memories, and adjusts from user feedback.
- Built autonomous web-research investigations: the agent generates its own search queries from user context, executes them on a schedule, and synthesizes results into ranked Leads with fit scores.
- Shipped a tailored-resume and cover-letter generator that re-emphasizes existing user material without inventing experience, with factual integrity enforced at the prompt layer.
- Designed Gmail OAuth integration and an outbound drafting pipeline; autonomous send is pending Google verification review.
- Heavy use of AI-assisted development workflows to move solo at the pace of a small team.

EXPERIENCE

Software Engineering Consultant (Contract) - Incora (Wesco Aircraft Hardware Corp.)

Chemical management and supply-chain software | Remote | Apr 2024 - Dec 2025

- Modernized React-based frontend applications for critical chemical management programs, improving legacy tcmlS workflows used across supply-chain and warehouse operations.
- Built and updated UI workflows that bridged newer tcmlS 2.0 functionality into the legacy tcmlS Classic experience, reducing the need for users to move between separate applications.
- Collaborated with Program Management to define requirements, diagnose root causes using transactional data, design solutions involving tcmlS code changes, and track execution.
- Supported receiving and warehouse QA workflows spanning Receiving Status/QVR, Catalog Part Verification, Implementation Builder, and Invoice Builder, including browser, SSO, tab, and scrolling integration issues.

Senior Full Stack Developer - EBPI Institute (Jaspr Health)

Crisis telehealth platform for emergency departments | Remote | Oct 2022 - Nov 2023

- Architected a guided telehealth product in Django and React, deployed across multiple hospital systems.
- Built and shipped as one of two engineers on a regulated, Epic-integrated crisis intervention platform deployed in active ER settings.
- Overhauled multi-tenant auth/authz architecture to enable white-label deployments for client organizations.
- Built peer management dashboard and collaborative tooling for distributed clinical staff.
- Built real-time Slack/SMS alert system enabling rapid clinical response to patient distress signals.
- Platform adopted by NY Mercy hospital network; Baylor Scott & White and additional hospital systems were in active acquisition before product sunset.
- Mentored junior developers and ran post-mortems that improved delivery cadence.

Full Stack Developer - Take Command Health

ICHRA health benefits startup | Dallas, TX | May 2019 - Oct 2020

- Built first-to-market ICHRA compliance platform from scratch on Django under federal regulatory deadlines; launched on schedule.
- Shipped self-guided ICHRA sign-up flow through rapid product pivots and legal uncertainty.
- Delivered React admin dashboards for real-time enrollment, claims, and compliance visibility.
- Shipped "Rosie," an OCR-powered automation bot that transformed claims intake and drove major support-efficiency ROI.
- Built internal tools platform from zero, replacing spreadsheet workflows and saving ops staff hours daily.
- Internal tooling supported company scale from 9 to 120 employees (13x headcount growth).

Python/Django Developer - Ontrak Health

Healthcare platform integration post-acquisition | Remote | May 2021 - Oct 2021

- Integrated React Native mobile app with Django backend during a complex post-acquisition system merge.
- Owned support and feature work for existing clients while paying down dual-codebase technical debt.
- Acted as direct stakeholder liaison aligning engineering with evolving business requirements.

Full Stack Developer - Real Geeks (Fidelity National Financial)

Real estate technology platform | Remote | Oct 2020 - Apr 2021

- Led Python 2 to 3 and Django 1.10 to 3.2 modernization of a platform serving thousands of agents with zero downtime.
- Established engineering standards and scaled agile processes across distributed teams.
- Drove developer culture via lunch-and-learns, shared tooling, and structured planning.

Co-Founder / Lead Developer - CenTex Paranormal

Scientific instrument hardware + software company | Austin, TX | Jan 2013 - May 2019

- Built a TypeScript web app for real-time sensor data visualization with interactive charting and data management.
- Co-founded and bootstrapped a niche electronics company end-to-end: designed, built, manufactured, and sold the EDI/EDI+ instrument line.
- Ran sales, marketing, fulfillment, support, and inventory solo.

ADDITIONAL EXPERIENCE

Co-Owner / E-commerce Operations - Swan Trading Company

Online bookselling business | Georgetown, TX | 2012 - Present (concurrent)

- Co-own and operate a long-running multi-channel used-book business across Amazon, AbeBooks, Biblio, and other online marketplaces.
- Manage sourcing, cataloging, pricing, inventory, order fulfillment, returns, customer service, and marketplace quality for a catalog of 5,000+ active listings.
- Maintain structured inventory and sales workflows focused on listing accuracy, fast fulfillment, shipping efficiency, and margin.

SKILLS

Backend: Django, Django REST Framework, Celery, PostgreSQL, Redis, pgvector

Frontend: React, TypeScript, React Native, Redux, Next.js, Webpack

Languages: Python, TypeScript, JavaScript, SQL, HTML/CSS

AI / LLM: Tool-calling orchestration, pgvector semantic memory, autonomous agent loops, prompt-layer safeguards, document/OCR processing, AI-assisted development workflows

Automation & Integrations: REST APIs, OCR/Document Processing, Twilio, Slack API, Gmail OAuth, Epic EHR

DevOps & Tools: Docker, CI/CD, Git, Sentry, AWS

Founding-Engineer Range: End-to-end product ownership, zero-to-one delivery, ambiguous-spec execution, stakeholder liaison, regulated/compliance environments

Leadership: Technical mentoring, agile/scrum, cross-functional communication, post-mortems

EDUCATION

Self-taught developer | 7+ years professional software engineering across healthcare, real estate, fintech, and IoT.