

Rhys Williams

Senior Software Engineer (Full-Stack / Product)

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PROFILE

Senior full-stack engineer who ships production products end to end, across mobile, web, API and data.

I have delivered a waste-carrier compliance SaaS live on the iOS and Android stores, the national lease-expiry intelligence platform behind Knight Frank's agency lead generation, and a contractor finance product that runs my own company.

I work AI-native, directing agentic coding tools through spec-driven workflows while owning architecture, security and the correctness of every commit, and I build AI features into the products themselves.

SKILLS

Languages: TypeScript, Java, C#, Python, Swift, SQL

Frontend: React, Next.js App Router, Angular, Turborepo, React Native / Expo, MapLibre, Tailwind

Backend & data: Node, .NET / ASP.NET Core, FastAPI, Spring Boot, PostgreSQL / PostGIS, Hasura GraphQL, Drizzle / JPA, REST / OpenAPI, Bruin, dbt, Meltano

Cloud & delivery: AWS, Azure, Terraform / Bicep, Docker, GitHub Actions, Azure DevOps

AI-assisted development: Claude Code, Cursor, spec-driven and agentic workflows, MCP

LLM features: multimodal document extraction, text anonymisation, confidence-scored suggestions, fit scoring, LLM report generation, SSE streaming

RECENT EXPERIENCE

Lead Software Engineer

Jun 2025 – Jul 2026

Knight Frank · Contract

London / Remote

- As lead engineer on a small team, authored the architecture for Knight Frank's enterprise data platform: a repeatable, code-first Bruin ELT backbone that lands any new dataset into a canonical PostgreSQL / PostGIS medallion store (raw, staging, canonical) under data-quality and freshness gates, exposed via Hasura GraphQL and FastAPI to apps on a shared Next.js / Turborepo front end, behind Entra ID SSO and Azure DevOps CI/CD.
- Built the first app with stakeholders, a sanctions screening tool for KYC/AML compliance: a Bruin pipeline ingesting five global sanctions datasets daily, normalised to the OpenSanctions standard and screened through an OpenSearch matching engine, with analyst decisions, an audit trail and Azure OpenAI reports; delivered as a working MVP in about two months.
- Then scaled those patterns to the far larger, fuzzier national property data (land ownership, energy performance, valuation and geography): a lease-expiry intelligence tool that surfaces commercial leases nearing expiry across England and Wales as leads for the London offices team, with a five-tier level-of-detail national map (MapLibre vector tiles from a Martin tile server) over 7.4M leases; production MVP in about three months.
- Built the Lease Matcher behind it: enriched 7.4M leases with floor area, energy rating and rateable value from free public data instead of paid-for commercial sources, covering about 66% of commercial leases. A deterministic PostgreSQL / PostGIS pipeline that joins on a shared reference where one exists and otherwise matches on address.

Founding Engineer

Jun 2025 – Present

Recyclr 🌐 recyclr.co.uk 🍏 App Store ▶ Google Play

Remote

- As founding engineer, one of two engineers who built the whole product (with a domain-expert CEO guiding): a waste-carrier compliance SaaS taken from concept to shipped, an Expo / React Native mobile app live on the iOS App Store and Google Play, a Next.js web app, and a Java / Spring Boot API on a PostgreSQL schema-per-tenant model, Terraform-defined on AWS.
- Built Recyclr's payments on Stripe Connect: on-site Tap to Pay, payment links with automatic invoice reconciliation, and Mail Order / Telephone Order (MOTO) card payments, each split to the carrier minus a platform fee.
- Designed one platform spanning sole traders and enterprise fleets with role-based access: sole traders get full capabilities, while fleet drivers get an abstracted, operational-only view (navigate to jobs, take card payment on site) that hides sensitive owner data such as accounts.

SELECTED PROJECTS

Solo engineer, personal product, Tax Tracker

- Built and shipped, as sole engineer, a contractor finance product I use to run my own company: a Next.js web app (React, TypeScript, Drizzle, PostgreSQL, Clerk) with per-user data isolation and a companion Expo / React Native app, directing Claude Code through a spec-first workflow and shipping in phases verified by Playwright and Vitest.
- Covers the full contractor workflow: invoicing, expense tracking, VAT calculation, Corporation Tax and Income Tax estimates, a working-day calculator, director's loan account (DLA) tracking, and a Google Sheets export for year-end accountant handover.
- Built the AI features: an account-aware financial chatbot with reversible client/supplier anonymisation, a bank-transaction matcher that proposes confidence-scored accounting actions (expenses, invoices, dividends, director's-loan movements), and receipt scanning that pulls supplier, VAT, totals and category from a photo, with validated output.

Solo engineer, client product, Tender

- Built a procurement-intelligence SaaS for a multinational fire-safety client: aggregates UK public-sector tender notices from multiple government portals (Find a Tender, Contracts Finder) into one searchable workflow with bid / no-bid status tracking, cutting the effort of finding tenders across separate portals (Next.js, React, TypeScript, PostgreSQL).
- Engineered a Python and Bruin ELT pipeline into PostgreSQL on a raw, staging and canonical (medallion) pattern: paginated OCDS ingestion with retry and rate-limit handling, JSONB sanitisation, bulk upserts and transformation SQL, feeding weighted full-text search backed by GIN indexes; ~850k tender notices ingested.
- Added AI fit scoring that rates each tender against a company profile with a go / no-go recommendation and drafts buyer outreach, streamed over server-sent events and cached per tenant.

EARLIER EXPERIENCE

Senior Software Engineer

Mar 2021 - Jun 2025

Curiosity Software

Oxford

- Core engineer on a small team building enterprise test data management and automation; led the product's AI capabilities, designed a multi-dialect SQL query executor, worked across a C# / .NET job engine and a Java and Angular application, and owned annual penetration testing and vulnerability remediation.

Software Engineer

Nov 2019 - Mar 2021

One Team Logic

Talbot Green

- Enhanced safeguarding software for schools and sports clubs (.NET MVC and .NET Core APIs, KnockoutJS and React); migrated caching from in-memory to Redis ahead of containerisation, with Cosmos DB as the latest-snapshot read model (CQRS); ran blue / green releases via Azure DevOps and Octopus, monitored with Application Insights.

Software Engineer

Aug 2019 - Nov 2019

Cardiff Metropolitan University

Cardiff

- Built internal systems for staff and students, including a .NET Core REST API managing the Active Directory lifecycle of students from application to placement (MS SQL Server, C#, PHP).

Software Engineer

Aug 2012 - Jul 2019

Aareon UK

Swansea

- Built and maintained large-scale housing-management software for UK social housing: a key contributor to the VB6 to VB.NET migration and backend on the web-platform rewrite (Angular, .NET Core REST API, Entity Framework).

EDUCATION

Swansea University

Swansea, Wales

BSc Computer Science

2008 - 2011