

JAKEB KNOWLES

Product-Focused Full-Stack Software Engineer | Product Builder

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Product-focused full-stack software engineer with 3+ years of experience turning ambiguous product problems into shipped SaaS, API, mobile, and real-time web applications. Strongest when working close to customers, product teams, and technical constraints at the same time: discovery, demos, architecture, frontend, backend, deployment readiness, and the details that decide whether a product survives real use.

CORE STRENGTHS

Product Engineering: Customer Discovery, MVP Demos, Requirements Gathering, Product Trade-Offs, Technical Leadership.

Full-Stack Delivery: React, TypeScript, AdonisJS, Laravel, PHP, Symfony/Slim, Node.js, REST APIs, React Native, Next.js.

Applied Data Structures: Typed API Contracts, Keyed Collections, Queues, Pagination, Filtering, Aggregation, Relational Modelling, SQL Indexes, Frontend State Management.

Data and Real-Time Systems: PostgreSQL, TimescaleDB, PostGIS, Aurora, MySQL, SQLite, DynamoDB, SQS, SSE, Mapbox/WebGL, Multi-Tenant Access Control.

Engineering Leverage: Test Strategy, CI Quality Gates, Legacy Modernisation, Documentation Systems, AI-Assisted Development Workflows.

Delivery Environments: AWS Lambda, Terraform, Jenkins, Backstage, GitHub Actions, Laravel Forge, DigitalOcean, Docker, Linux, Vault, ArgoCD logs.

EXPERIENCE

Software Engineer / Technical Lead - Simpro Software

Jun 2025 - Present | Brisbane, QLD | Hybrid

FLEET MANAGEMENT REBUILD

- Sole technical lead for the rebuild of Simpro's fleet management platform, replacing a 13-year-old legacy product with a React/TypeScript SPA and AdonisJS REST API.
- Personally designed and implemented roughly 95% of the product across React, TypeScript, AdonisJS, TimescaleDB, Aurora, PostGIS, Mapbox/WebGL, SSE, TanStack Query, and Zustand.
- Partnered with PMs, designers, executives, and customers to demo MVPs, gather requirements, retain multiple six-figure ARR accounts, and grow committed tracker demand from roughly 5k to 8k.
- Architected an approved real-time tracking platform designed for up to 20k trackers across four regions, moving from 2-minute polling toward near-real-time updates.
- Designed frontend and API data structures using typed contracts, keyed vehicle collections, batched SSE updates, and state/query patterns that kept roughly 1,000 map vehicles rendering smoothly.
- Modelled relational, time-series, and geospatial data across Aurora, TimescaleDB, and PostGIS, including vehicle records, geosites, reports, location logs, site arrivals, and behaviour events.
- Optimised expensive reporting and metrics workflows using TimescaleDB aggregates, query design, asynchronous queues, and notification flows for long-running report generation.
- Implemented multi-tenant access controls using JWT identity propagation, licence gating, company-scoped models, OAuth2 client credentials, and secure data access boundaries.
- Built reporting, service booking, geosite arrival/departure, technician schedule, behaviour event, and notification workflows across the frontend and backend.
- Maintained roughly 85% test coverage with Japa, Vitest, and Playwright while owning beta/UAT readiness, deployment scripts, migration safety checks, and CI quality gates.

EXTERNAL API AND DEVELOPER EXPERIENCE

- Built and maintained Simpro's public partner API on Symfony/Slim, adding endpoints, fixing production defects, supporting OAuth2 integrations, and adding Bruno E2E coverage for workflows used by hundreds of partners.
- Built high-volume supplier import and invoice export integrations for enterprise customers including Wesco, Rexel, Sage Intacct, and Xero, using AWS Lambda, SQS, DynamoDB, Terraform, and API-driven bulk workflows.
- Resolved 50+ partner API forum threads and helped resolve multiple P1 API incidents, including cache-related failures introduced during a Slim v4 upgrade.
- Rebuilt the API documentation experience by extending a Redocly documentation site with custom search, reducing navigation from minutes of manual browsing to seconds of direct lookup.

LEGACY MODERNISATION

- Led frontend modernisation of a React/Django data automation platform that generated invoices, supplier inventory, jobs, quotes, and other entities from email-fed document templates.
- Migrated the platform from CRA to Vite, upgraded MUI v4 to v6, reduced known frontend vulnerabilities from roughly 800 to 8, and improved build times from roughly 30 seconds to 2-3 seconds.
- Created reusable base table and infinite-scroll table components while refactoring Cypress E2E tests to protect against regressions and standardise shared UI patterns.

LEADERSHIP AND ENGINEERING LEVERAGE

- Promoted from Junior Software Developer to Senior Associate Software Engineer to Software Engineer within nine months, driven by delivery speed, technical ownership, and ability to solve ambiguous product problems.
- Delivered internal engineering talks on PHP/MCP, JavaScript frameworks, developer tools, and agentic engineering workflows; built repo-specific AI workflows using docs, agents, skills, hooks, and review loops.

Software Engineer - FONSEKA Innovations

Apr 2024 - Jun 2025 | Brisbane, QLD

- Built and maintained full-stack business applications across Laravel, Vue, React, Next.js, React Native, PHP, JavaScript, TypeScript, SQL, and Tailwind CSS.
- Developed high-traffic Laravel applications for large userbases, using event-driven architecture, workflow optimisation, and test coverage targets around 90%.
- Led delivery of Fertility Quest, a React Native and Expo mobile app backed by a Laravel API, token-based authentication, user profiles, activity logging, Stripe subscription tiers, quizzes, and structured course content.
- Delivered the Fertility Quest MVP in one month against an initial two-month estimate, balancing mobile UX, backend API design, subscription handling, and release readiness.
- Built an internal project management platform spanning lead generation, quoting, order handling, MSA workflows, real-time dashboards, sales lifecycle metrics, and workflow visibility across the business.
- Used TDD across Laravel and React with PHPUnit, Pest, and Jest to improve confidence across core business workflows, API contracts, search behaviour, and UI changes.
- Rebuilt core CRUD and document-generation workflows in a 10+ year-old service platform using Vue and Laravel, integrating third-party services including Google Maps.
- Improved maintainability across five large-scale applications by increasing test coverage, reducing high-risk change patterns, and working with SQL-heavy backends using Eloquent and raw queries.

Product Builder / Indie Developer - JK Web Dev

Jul 2023 - Present | Side projects and independent builds

- Build and ship independent web and mobile products across Laravel, React, React Native, Expo, Angular/Ionic, TypeScript, Stripe, SQLite, MySQL, Node.js, MongoDB, GitHub Actions, and Linux hosting.
- Own the full product loop across idea shaping, UX decisions, implementation, testing, deployment, maintenance, and iteration.
- **Trendsetter:** Building an AI-powered goal-setting app that turns natural-language conversations into structured plans, timelines, calendar events, progress logs, and point-based goal tracking. Built with Expo, React Native, Laravel, SQLite, Zustand, NativeWind, OpenAI API, Pest, Jest, GitHub Actions, and GitHub Projects.
- **Picklewear:** Designed and built a custom Laravel and React e-commerce platform for an online pickleball retailer, including admin dashboards, product management, order management, Stripe payment flows, AusPost order tracking, SEO metadata, admin inventory controls, and roughly 95% backend test coverage.
- Built the current portfolio site in a day using React, Next.js, TypeScript, generated resume assets, and agentic workflows for planning, implementation, review, and iteration.
- Built several earlier product experiments across Angular/Ionic, Node.js/Express, MongoDB, SQLite, REST APIs, WebSockets, Stripe, and third-party APIs, including Nomster, Freeman's Mowing, Japres, Bantz, and finance/data tools.

EDUCATION AND CERTIFICATIONS

Bachelor of Information Technology, Major in Software Development - Griffith University, Oct 2023

Academic Improvement Award Recipient, 2023 | Fundamentals of Digital Marketing - Google, Mar 2024

REFERENCES

Available on request.

Professional references include a former Engineering Manager and Senior UX Designer from Simpro.