ARUN KUMAR

Senior Full-Stack, Mobile & Systems Engineer | Founding Member & CTO

TypeScript • Next.js 16 • React 19 • Node.js • Go (Golang) • Flutter • PostgreSQL (Supabase) • MongoDB • PHP

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PROFESSIONAL SUMMARY

Senior full-stack, mobile, and systems engineer with **9+ years of commercial experience (2017–2026)** shipping production web platforms, cross-platform Flutter apps, native Go/Electron desktop POS systems, and high-throughput data pipelines for clients in India, the UAE, Australia, and the UK. Founding Member & CTO at Redpulse Software LLP. Hands-on across Next.js 16, React 19, TypeScript, Node.js/Express, Go (Golang), Flutter, PostgreSQL (Supabase RLS), MongoDB, Payload CMS 3, Sanity, and PHP/Laravel—backed by **3,700+ automated unit, RLS, and Playwright E2E tests**.

TECHNICAL SKILLS

Languages: TypeScript (strict), Go (Golang 1.27), JavaScript, Dart, PHP 8.x, SQL, HTML5, CSS3

Frontend: React 19, Next.js 16 (App Router, RSC, ISR), Astro 5, Tailwind CSS v4, shadcn/ui, Radix UI, TanStack Query & Table, React Hook Form, Zod, Redux, Recharts, Framer Motion

Backend & CMS: Node.js, Express 5, Go (concurrency, mmap, Wails v2), Payload CMS 3, Sanity v5, Laravel 12, REST APIs, WebSockets, Webhooks

Databases & ORMs: PostgreSQL 18, SQL, MongoDB / Cosmos DB, SQLite (WAL/STRICT), MySQL, Supabase (RLS, Auth), Prisma ORM, Drizzle ORM, Mongoose ODM

Mobile, Desktop & Browser: Flutter 3.38 (5 live Google Play apps, sqflite, ML Kit OCR), Wails v2, Electron 32, ESC/POS Printing, Chrome Manifest V3

Cloud, Servers & MERN Deployments: AWS (EC2, S3), Microsoft Azure (VMs, App Service, Static Web Apps, Cosmos DB), Azure Entra SSO (SAML 2.0 & PKCE), Windows Server IIS, Reverse Proxy (IIS, Nginx, Caddy TLS), Docker, PM2, Cloudflare Workers, Vercel, Stripe, Razorpay, WhatsApp Cloud API, GoHighLevel, Meta CAPI, Vitest, Go test, Playwright E2E

PROFESSIONAL EXPERIENCE

Founding Member & Chief Technology Officer (CTO) — Redpulse Software LLP **Feb 2025 – Present**
Karur, Tamil Nadu, India (Hybrid / Global Remote Delivery)

- Own architecture, hands-on engineering, automated testing, and releases across client and internal products in India, UAE, AU, and UK.
- Shipped a **169-endpoint multi-tenant enterprise platform** (Express 5, React 19, MongoDB/Cosmos, Docker/Caddy TLS Control Plane, Microsoft Entra SAML 2.0 + PKCE SSO, and Groq LLM remediation drafting).
- Built Redpulse Sales & WhatsApp Cloud API CRM (Next.js 16, Supabase Postgres, 89 routes, 119 SQL migrations) verified by **3,007 automated tests** (2,183 Vitest, 450 Postgres RLS, 374 Playwright E2E).
- Engineered Go + Wails + SQLite systems: a **505 MB/s memory-mapped SQL dump parser** (50 GB+ files in <2.4 GB RAM) and an offline GST POS desktop app with **708 passing Go tests**.
- Led the Payload CMS 3 + Next.js 16 rebuild of Pure Harvest Smart Farms UAE (pureharvestfarms.com) and shipped 5 Google Play Flutter apps.

Independent Mobile & Full-Stack Consultant (Self-Employed) **Jun 2020 – Jan 2025**
Remote — Karur, Tamil Nadu, India (4 Years 8 Months)

- **Full-Stack MERN & Next.js (2023 – Jan 2025):** Delivered custom SaaS apps, 3-branch retail e-commerce (1,500+ SKUs, Razorpay), multi-campus school ERPs (1,200+ students), real-estate portals (500+ listings), and multi-account marketing analytics dashboards.
- **Cross-Platform Flutter Mobile (2020 – 2023):** Built and shipped Android/iOS Flutter apps including restaurant ordering (200+ daily orders, GPS tracking), SQLite offline-first business tools, and custom PDF generators.

PHP & Web Application Developer — AJ Infoteck & Seyali **Aug 2017 – May 2020**
Tamil Nadu, India (2 Years 10 Months)

- Developed and maintained PHP, MySQL, WordPress, JavaScript, and Bootstrap web applications, custom admin CMS backends, CRUD APIs, and responsive corporate portals for business clients.

KEY PRODUCTION SYSTEMS

Pure Harvest Smart Farms (UAE) — Headless CMS Rebuild pureharvestfarms.com
Next.js 16, React 19, TypeScript, Payload CMS 3 (21 Collections), PostgreSQL 18, AWS S3, Docker (250+ commits)

- Unified public ISR site and Payload admin in one Next.js 16 app; S3 on-the-fly AVIF/WebP route + legacy URL proxy preserving 100% of search rankings; Playwright + axe-core WCAG E2E suite.

Multi-Tenant Enterprise Workflow, Evidence & Entra SSO Platform Express 5 / React 19 / Docker
MongoDB / Cosmos DB, Caddy On-Demand TLS, SAML 2.0 & OIDC PKCE SSO, Groq Llama-3.3

- 169 REST endpoints, 23 schemas, 4-role Maker-Checker RBAC, 50-col transactional Excel importer, AI drafting, and 102-test Docker Control Plane automating isolated tenant subdomains & Entra SAML SSO.

Redpulse Sales & WhatsApp Cloud API CRM Next.js 16 / Supabase PostgreSQL
TypeScript (strict), Row-Level Security, Tailwind v4, shadcn/ui, WhatsApp Cloud API, Sentry

- 89 routes, 119 SQL migrations, Kanban pipeline, live 2-way WhatsApp Cloud API inbox, server PDF quotes, milestone billing, 7 analytics reports, and 3,007 automated tests (including 450 Postgres RLS isolation tests).

SQLer & Extractor (505 MB/s Go Engines) + Offline Desktop POS Suite Go 1.27 / Wails v2 / Electron 32

Memory-Mapped I/O (mmap), Pure-Go SQLite (STRICT/WAL), Drizzle ORM, React 19, ESC/POS

- 505 MB/s `mmap` SQL-to-CSV engine (50 GB+ dumps in 2.3 GB RAM), 355 MB/s 256-shard CSV-to-JSONL deduplicator, 708-test Go/Wails GST POS, and Electron 32 CoffeeShop POS with thermal receipt printing.

UAE Engineering, Coaching Funnels, MV3 Extension & 5 Live Google Play Apps Next.js / Sanity v5 / Flutter 3.38

burjengineering.com • QR Studio • Invoice Maker • Doc Scanner (ML Kit) • Habit Tracker • WP Detector

- Delivered Dubai engineering portal (`llms.txt` + JSON-LD), Sanity v5 + Razorpay + Meta CAPI webinar engine, Gounder Thirumanam (Next.js + Flutter + Supabase), Shadow-DOM MV3 Lead Capture extension, and 5 live Google Play Flutter apps.

EDUCATION & LANGUAGES

B.C.A. — Bharathidasan University, Tiruchirappalli (2013 – 2016) | **MERN Master Program** — LIVEWIRE (2022) | **Web & PHP** — NIIT (2017)

Languages: Tamil (Native) | English (Professional Working Proficiency)