

Arunkumar Kubendran

Software & Blockchain Solution Architect

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About

Software architect with 20+ years of experience building production-ready systems across full-stack, blockchain, AI, and cloud. I help startups go from idea to launch — designing scalable architectures, building high-performance backends, and keeping infrastructure costs lean. My work spans fintech, healthcare, SaaS, and Web3 — always with a bias toward simplicity, fast execution, and systems that are easy to scale and maintain. I also run a training platform where I mentor developers in full-stack development and system design with real-world, hands-on projects.

Education

Year	Degree
2003 – 2006	B.Sc. Computer Science
2006 – 2009	MCA — Master of Computer Application

Career

Year	Role	Organization
2005 – 2008	Java Trainer	CSC Computer Education
2007 – 2010	Software Engineer	Eighthills Private Ltd
2010 – 2011	Product Manager	Mindmade Technologies
2011 – 2015	CTO	Venpep Solutions
2015 – 2019	Lead Software Engineer	TNQ Technologies

Year	Role	Organization
2019 – 2021	Lead Software Engineer	Intelligent Private Ltd
2021 – Present	Freelancer — Software / Blockchain Solution Architect	Independent

Projects

Blockchain

Tokenize Film Asset — Story Protocol

Architected a Real World Asset (RWA) tokenization platform for creative assets including music, images, films, and songs. Built on Story Protocol blockchain, enabling creators to tokenize intellectual property and manage ownership, licensing, and royalties on-chain.

Tech: Story Protocol · Solidity · Smart Contracts · RWA Tokenization

Cube — Short URL + Token Rewards

Designed and developed an end-to-end reward system that incentivizes short URL usage with CUBE token on the TRON ecosystem. Built the full stack — smart contract for token distribution, frontend for user interaction, and backend for URL management and analytics.

Tech: TRON · Solidity · Smart Contracts · React · Node.js

PIF — Staking Platform

Built a staking application on the Ethereum ecosystem, allowing users to stake tokens and earn yield. Designed the smart contract architecture for secure staking mechanics and reward distribution.

Tech: Ethereum · Solidity · Smart Contracts · Web3.js

Full Stack Development

Elytz CRM — Multi-Tenant SaaS Platform

Architected and built a full-featured multi-tenant SaaS CRM platform from scratch without any framework — pure PHP 8.1+, MySQL, and a vanilla JavaScript SPA frontend. Features a complete CRM suite (leads, contacts,

companies, deals, Kanban pipeline), multi-channel messaging (Email, SMS, WhatsApp, RCS) with campaign management, and a workflow automation engine (trigger → condition → delay → action). Designed with shared-database row-level tenant isolation, JWT + API key auth, RBAC with custom roles, white-label branding, reseller module, SLA tracking, subscription billing with feature gating, a landing page builder with form capture & UTM tracking, and 40+ REST API endpoints with Swagger documentation.

Tech: PHP 8.1+ · MySQL · Vanilla JS SPA · Bootstrap 5 · JWT · REST API · Swagger · Multi-Tenant Architecture

Aana Blog Engine — AI-Powered Content Generation & Publishing

Architected an AI blog generation platform that automates content creation using local LLMs (Ollama) and AI image generation (ComfyUI/FLUX), with one-click publishing to WordPress and WooCommerce. Built a multi-step wizard workflow — prompt input, AI content generation with SEO optimization, inline image generation with customizable prompts, markdown editor with live preview, and automated WordPress publishing with image uploads. Designed an asynchronous job queue system with two independent worker daemons (text and image) using PHP CLI processes with database-level locking (FOR UPDATE SKIP LOCKED) for reliable concurrent processing. Includes a credit-based billing system (EGOLD) with per-operation metering, UPI payment integration, and a custom WordPress plugin (aana-blog-connector) for secure publishing across multiple post types.

Tech: PHP 8.0+ · MySQL · Vanilla JS · Ollama · ComfyUI · WordPress REST API · Job Queue · Apache

Aana Text2Image — Self-Hosted AI Image Generation Platform

Built a production-ready, self-hosted text-to-image platform using plain PHP and MySQL with ComfyUI as the AI backend — no per-image API costs. Designed a decoupled architecture with a background worker queue (with retry logic) running on a separate GPU machine, communicating via secure internal APIs. Features a credit-based monetization system with UPI payment integration, admin approval workflows, and a full admin panel for user management, payment approvals, and generation monitoring. Includes security measures like images stored outside webroot and served via a PHP proxy with UUID-based filenames, NSFW prompt filtering, rate limiting, and temporary email blocking. Shipped as a white-label-ready product with a public landing page — available as a commercial product on Gumroad.

Tech: PHP 8.1+ · MySQL · ComfyUI · Background Workers · UPI Payments · Apache

Robin — AI-Powered Blackbox Testing Platform

Architected a B2B orchestration-based blackbox testing platform capable of testing any software or web application at any scale and module level. The system supports smart data projection — importing raw data, filtering representative subsets that cover edge cases, and auto-generating test cases and scenarios. Integrated Camunda and n8n for workflow orchestration, and later incorporated AI agents with MCP to reduce end-user effort. Includes module proxying for cases where clients cannot share internals.

Tech: Camunda · n8n · AI Agents · MCP · LangChain · Python · Node.js

Patient App — WhatsApp Healthcare Bot

Designed a healthcare communication platform that reduces unnecessary hospital visits for patients with long-duration medical conditions. A medical coordinator bridges conversations between patient and doctor via WhatsApp, handling routine queries about medication, diet, exercise, and travel. Doctors review all conversations and intervene only when clinical attention is needed — saving time for both parties.

Tech: WhatsApp Business API · Node.js · WebApp · Real-time Messaging

Wallex — Cross-Border Money Transfer

Contributed to a cross-border money transfer platform, designing and developing partner-facing APIs that enable third-party platforms to offer Wallex's transfer services under their own brand. Partners integrate via API and apply their own fee structure on top.

Tech: REST API · Node.js · Fintech · Partner Integration

A2D — Sports Betting Platform

Developed a React-based sports betting application with a back-office management system. Designed and built a custom internal crypto wallet system — each user gets a centralized wallet for funding, betting, and withdrawals. Handled complex table layouts and both frontend and backend API development.

Tech: React · Node.js · Crypto Wallet · REST API

Trend Center — Social Media Aggregator

Built a trend aggregation dashboard that collects trending data from social media platforms and news sites. Users can configure categories in their settings, and the dashboard surfaces only relevant trends — providing a personalized, noise-free view of what's trending.

Tech: React · Node.js · Web Scraping · REST API · Dashboard

Petorable — Pet Social Network

Architected the full application — an Instagram-style social platform focused on pet owners. Users can post images, text, and video content, as well as sell services, products, and pets. Designed the system architecture and led backend development.

Tech: Node.js · REST API · Media Storage · Social Platform Architecture

Trading Bot — Automated Gold Trading

Built a Python-based automated trading bot that trades XAUUSD (Gold) via MetaTrader 5. Implements a multi-factor strategy that yields approximately 10% monthly returns over the long term.

Tech: Python · MetaTrader 5 · Algorithmic Trading · Technical Analysis

Telegram / WhatsApp Generative AI Bot

Built a Generative AI chatbot using LangChain with a RAG (Retrieval-Augmented Generation) architecture. Documents are embedded into a vector database, and the bot retrieves relevant context to generate accurate, grounded responses via Telegram and WhatsApp.

Tech: LangChain · Vector DB · RAG · Generative AI · Telegram API · WhatsApp API

Telegram / WhatsApp Conversational Bot — Telecom Support

Developed a conversational bot for a telecom service provider handling both inbound and outbound support. The bot follows a pre-defined conversation flow where users select from options to record and resolve support queries.

Tech: Telegram API · WhatsApp API · Node.js · Conversational Flow Engine

Voxeo — Voice Auto Telecaller

Built a voice-based automated telecalling system — an early implementation of what is now common in gas booking confirmations and customer care support. The system handles outbound voice calls with interactive response handling.

Tech: Voxeo · VoiceXML · IVR · Telephony

Audio Share Stream — WebRTC Radio (POC)

Developed a proof-of-concept platform using WebRTC to stream audio in real-time via channels. Designed for podcast social networking — when a subscriber listens to paid content, their followers can join and listen along for free, like a live radio broadcast.

Tech: WebRTC · Node.js · Real-time Streaming · Audio

Kannel SMS Gateway — SMS Auto Bot

Built an SMS-based automated bot using the Kannel SMS gateway. Similar to the systems still in use by TRAI for mobile number portability and operator changes.

Tech: Kannel · SMS Gateway · Telephony · Automation

Mobile App

Wallex Back-Office — Internal Operations Mobile App

Built an internal mobile application for the Wallex team to handle back-office operations on the go. Enabled staff to manage and process cross-border money transfer workflows, approvals, and partner support tasks directly from mobile — improving operational efficiency and response times.

Tech: Mobile Development · REST API · Fintech · Internal Tooling

OTT Platform — Web-to-Mobile App Conversion

Converted an existing web-based OTT (Over-The-Top) streaming platform into a mobile app using a WebView-based architecture. Wrapped the web platform with native mobile capabilities, ensuring a seamless viewing experience while minimizing development effort and maintaining a single codebase for content delivery.

Tech: Mobile Development · WebView · OTT · Streaming

Singapore Tour Attraction App — Mobile Booking with Pocket Printer

Developed a mobile application for a Singapore tour attraction where users can browse and select tour packages. Operators use the app to book tickets and print receipts on-the-spot via an integrated pocket printer.

Tech: Mobile Development · Bluetooth Printing · Booking System