Full Stack Developer

# Portfolio of Work

React · Node.js · Next.js · React Native · SaaS · AI Systems

3 Projects · Production-Grade Engineering · $20/hr on Upwork

| # | Project | Description |
|---|---|---|
| 01 | **Full-Stack Deployment & SEO** | Kept Cold Ltd (London) — 104-page commercial refrigeration site. Stripe payments, serverless email system, DNS migration, technical SEO. |
| 02 | **AI Voice Receptionist (HVAC)** | Australian HVAC company — AI agent Aria answers calls 24/7, books jobs, qualifies leads, with a live 8-page React dashboard. |
| 03 | **Pizza Funnel — Restaurant SaaS** | Multi-tenant SaaS for Pakistani pizza restaurants. WhatsApp AI ordering agent (Roman Urdu), Facebook ad generator, KDS, driver app. |

Project 01

# Full-Stack Deployment & SEO Implementation

Node.js · Vercel · Stripe · Resend · Technical SEO · DNS Migration

# Full-Stack Deployment & SEO Implementation

## London-Based Commercial Refrigeration Company — 104-Page Website

Stripe Payments · Transactional Email System · Technical SEO · Serverless Infrastructure

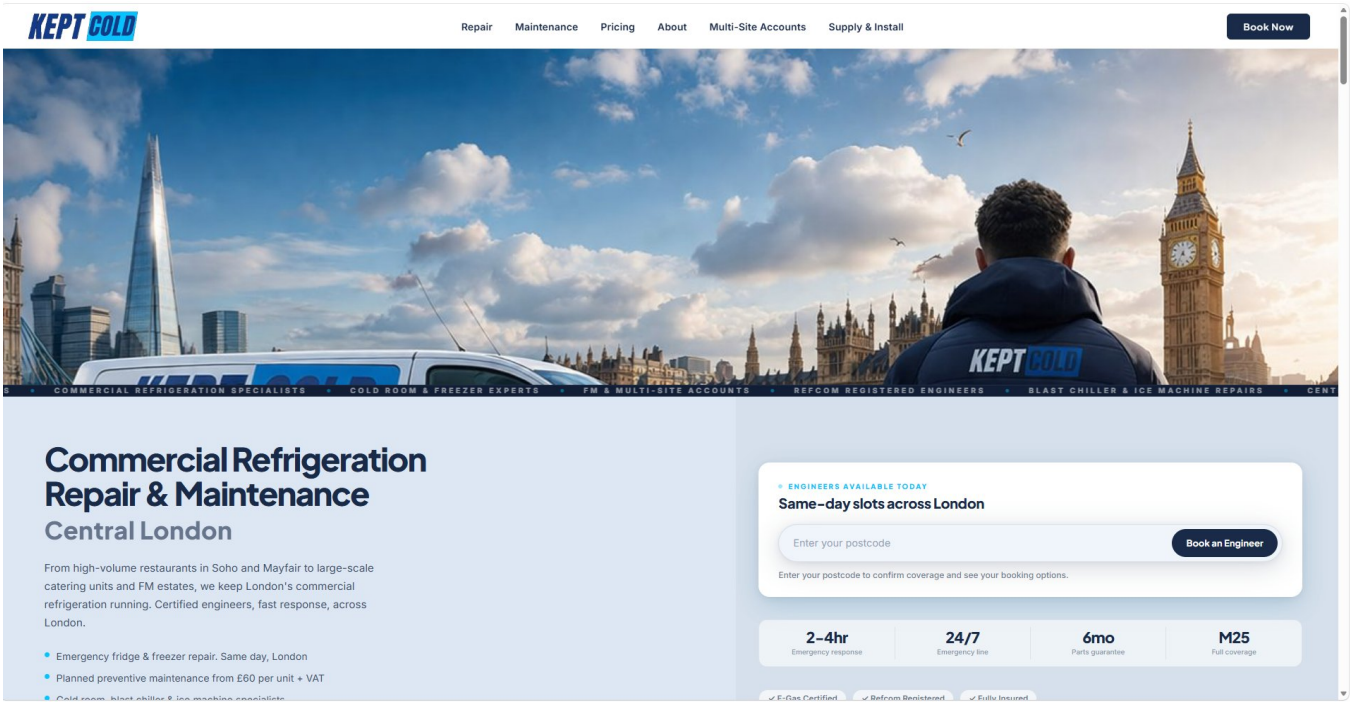
Live Site: https://www.keptcold.co.uk

| 104 | 5 | 4 | 19 | 18+ | 100% |
|---|---|---|---|---|---|
| HTML Pages | API Endpoints | Email Templates | SEO Redirects | Feature Iterations | Live-Mode Verified |

## Project Overview

End-to-end deployment and feature development for **Kept Cold Ltd**, a B2B commercial refrigeration repair, maintenance, and supply company serving Greater London. Took the project from raw static HTML files through DNS migration, hosting setup, Stripe payment integration, transactional email automation, comprehensive technical SEO, and go-live — handling every layer from infrastructure to UX across 104 pages.

**Node.js · Vercel Serverless · Stripe (Live) · Resend API · HTML5 / CSS3 / JS · PostgreSQL · JSON-LD Schema · Google Search Console · GitHub CI/CD · Python Scripting · DNS Management · Technical SEO**




*Homepage — Commercial Refrigeration Repair & Maintenance (Live Site)*

## Key Deliverables

## 01 Infrastructure & Deployment

- Migrated DNS from HostGator to 123-Reg, configured A/CNAME/MX/TXT records for Vercel, preserving Microsoft 365 email continuity throughout
- Deployed to Vercel with auto-SSL, edge CDN, and 5 serverless Node.js API endpoints
- Configured HTTP 301 Permanent Redirect from apex domain to www — resolved Vercel's default 307 temporary redirect causing Google to split-index both domain versions
- Resolved Vercel Hobby plan collaboration restrictions through git commit author alignment

## 02 Stripe Payment Integration (Live Mode)

- Built two separate checkout flows: maintenance booking (equipment-based pricing) and repair call-out (4-step priority wizard)
- Implemented 20% UK VAT calculation with line-item precision and metadata passthrough
- Set up live mode webhook endpoint with signature verification for checkout.session.completed events
- Custom booking references (format: KC-XXXXXX) wired to trigger branded confirmation emails — 100% payment-to-email flow tested in production

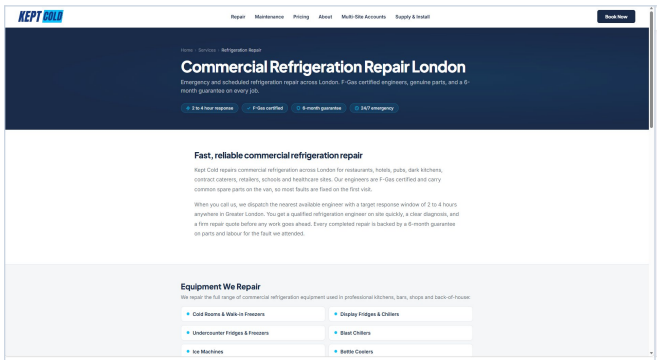
## 03 Resend Transactional Email System

- Replaced unreliable Formspree with Resend API — resolved file upload limits and poor email formatting
- Built 4 branded HTML email templates with shared design system (logo header, sectioned content, footer)
- Multipart-free architecture using base64 file uploads via JSON for Supply & Install attachments
- Customer + business owner notifications; domain verified with DKIM, SPF, MX records at 123-Reg

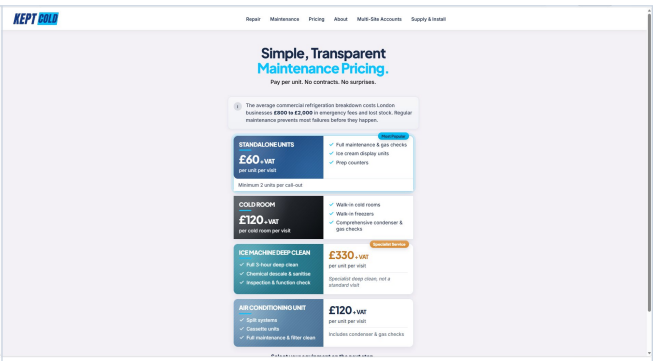
## 04 Technical SEO Implementation

- Added canonical tags to all 104 pages (self-referencing www URLs) — eliminated duplicate content risk
- Implemented JSON-LD Organization schema sitewide with logo, NAP, and structured address data
- Configured 19 permanent 301 redirects preserving legacy URL SEO authority
- Set up Google Search Console (DNS-verified) + sitemap with 98 URLs submitted
- Replaced 98 instances of Cloudflare-obfuscated email placeholder with clean mailto: links via Perl regex

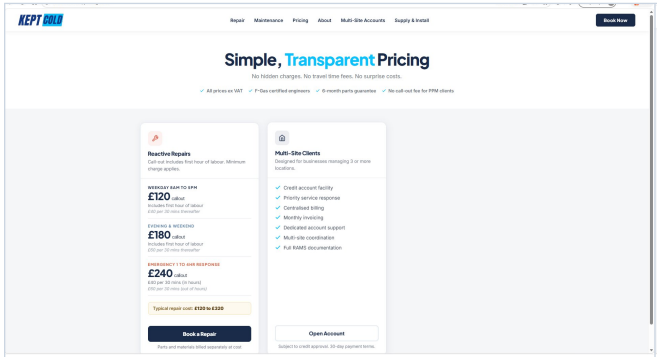
## Live Site Screenshots



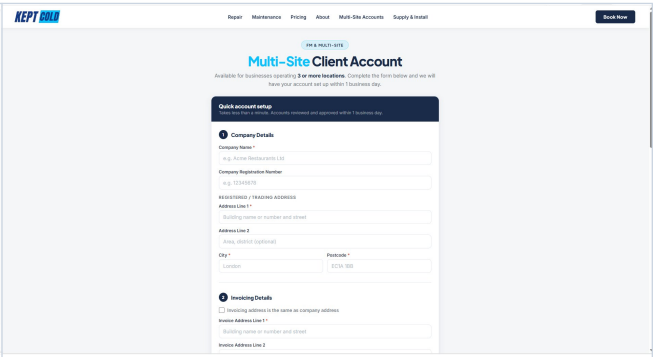

*Service Page — Repair Services with Equipment Categories*



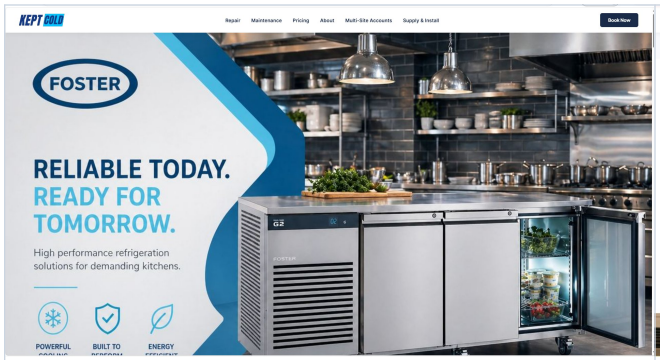

*Pricing Page — Transparent Maintenance Pricing*



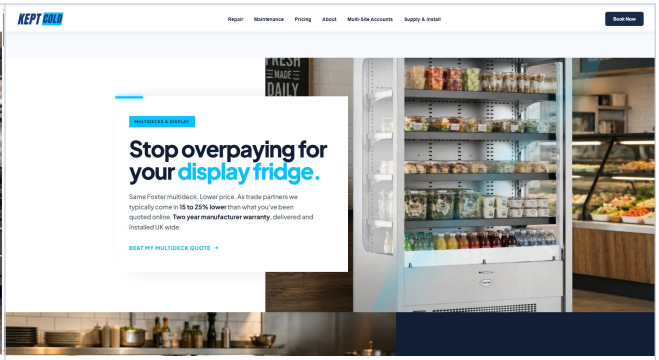

*Pricing Page — Reactive Repairs & Multi-Site Client Accounts*



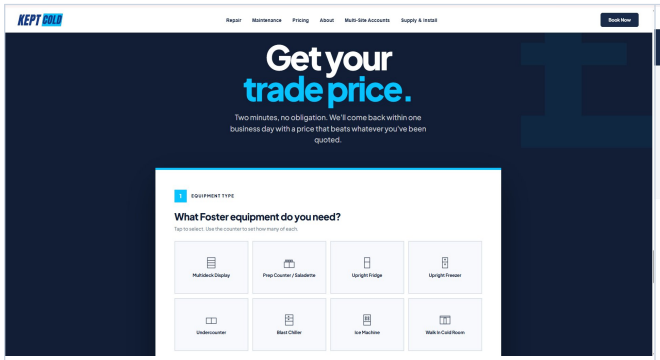

*Multi-Site Client Account Setup Form*



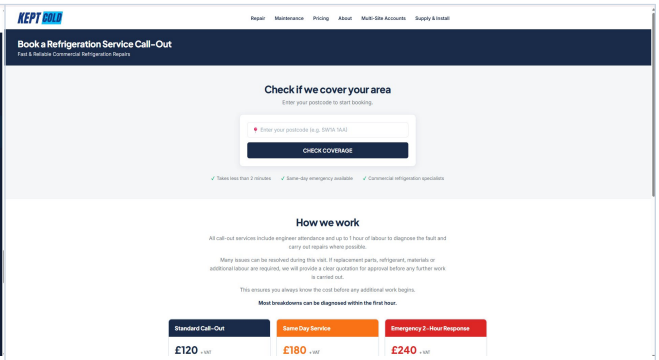

*Supply & Install — Foster Brand Partner Page*




*Supply & Install — Display Fridge Product Section*




*Supply & Install — Equipment Selection Wizard*




*Booking Flow — Postcode Coverage Checker & Call-Out Pricing*

## Challenges Solved

### Vercel 307 → 301 Redirect

Vercel's default apex→www redirect was HTTP 307 (temporary), causing Google to split-index both domain versions. Identified via curl header inspection and reconfigured to a permanent 301 redirect — consolidated all domain authority to www.

### Stripe Live Webhook Failure

Payments succeeded but confirmation emails weren't sending in live mode. Diagnosed by inspecting Vercel function logs — the live mode webhook endpoint wasn't registered. Set up separate live webhook with its own signing secret, resolving silent failures.

### 98x Email Obfuscation Cleanup

Migrated site had 98 instances of Cloudflare's [email protected] obfuscation placeholder. Bulk-replaced with proper mailto: links via Perl regex scripting, preserving adjacent SVG icon markup throughout.

### VAT Calculation Bug

UI showed VAT-inclusive total but Stripe was charging the net amount. Traced the mismatch across both frontend and API layers and aligned the line-item pricing logic — ensuring customers were charged the correct VAT-inclusive amount.

## Key Achievements

| Achievement | Impact |
|---|---|
| **Live Stripe Payment Integration** | Real customers book and pay online; webhooks trigger branded email automation end-to-end |
| **DNS Migration — Zero Email Downtime** | Microsoft 365 business email preserved throughout full host migration to Vercel |
| **104 Fully SEO-Optimised Pages** | Canonical tags, JSON-LD schema, sitemap, and Search Console submitted across all pages |
| **19 Legacy URL 301 Redirects** | Full SEO authority preserved from old site URLs — no ranking loss during migration |
| **Apex → WWW Permanent Redirect** | Eliminated split-indexing; consolidated all domain authority to canonical www version |
| **4 Branded HTML Email Templates** | Professional customer + business owner notifications with shared design system |
| **18+ Client Feature Iterations** | Responsive collaboration throughout — open/close pickers, postcode checker, mobile UI, modals |

## Client Feature Development (18+ Improvements)

✓ Custom open/close time range picker with preset options and custom mode

✓ Postcode coverage checker with auto-redirect and bfcache state restoration

✓ Mobile-aware sticky emergency bar, scroll-hide CTA, and hamburger navigation

✓ Modal-based success/error feedback with backdrop blur, scale-in animations, and keyboard accessibility

✓ Bulk find-replace operations across 100+ HTML files via Python/Perl scripting

✓ Manufacturer brand logos linked to authoritative external sources for E-A-T SEO signals

✓ SEO-friendly logo filename rename with strengthened alt text across all 104 pages

✓ Supply & Install base64 file attachment architecture (multipart-free JSON uploads)

## Full Tech Stack

| | |
|---|---|
| **Frontend** | HTML5 (104 static pages), CSS3 (custom design system, mobile-first), Vanilla JavaScript, JSON-LD Schema.org |
| **Backend** | Node.js (ES Modules), Vercel Serverless Functions (5 endpoints), Stripe SDK, Resend SDK, dotenv |
| **Infrastructure** | Vercel (hosting, CDN, edge, auto-SSL), 123-Reg DNS, GitHub CI/CD, Vercel CLI |
| **3rd-Party APIs** | Stripe (live mode payments + webhooks), Resend (transactional email), Microsoft 365 (email preserved), Google Analytics 4, GTM |
| **SEO Tools** | Google Search Console (DNS verified), Schema.org, robots.txt, sitemap.xml, canonical URL strategy, 301 redirects |
| **Scripts & Tools** | Python 3 (bulk HTML transforms), Perl (regex find-replace), Bash (deployment), curl (header inspection) |

## Skills Demonstrated

✓ Serverless Node.js development (Vercel functions)

✓ Stripe Checkout integration — test & live modes, webhooks

✓ Transactional email systems (Resend, branded HTML templates)

✓ DNS migration & management without email downtime

✓ Technical SEO — canonical, schema, redirects, sitemap

✓ Static site optimisation (104-page bulk transformations)

✓ Production deployment & DevOps (Vercel CLI, env vars, monitoring)

✓ Bulk HTML/CSS refactoring via Python, Perl, and Bash scripting

✓ Client communication & iterative feature delivery

✓ End-to-end production troubleshooting (DNS, payments, email)

## Ready to build something like this?

If you're serious about software that scales with your business — production-grade, clean architecture, delivered to spec — let's talk.

**■ Message me on Upwork to get started.**

Senior Full Stack Developer · React · Node.js · Next.js · SaaS Architecture · $20/hr · Upwork

Project 02

# AI Voice Receptionist for HVAC Business

React · Node.js · Retell.ai · Claude AI · Twilio · Supabase · Railway

# AI Voice Receptionist for HVAC Business

**24/7 AI Phone Agent · Real-Time React Dashboard · Full-Stack SaaS Platform**

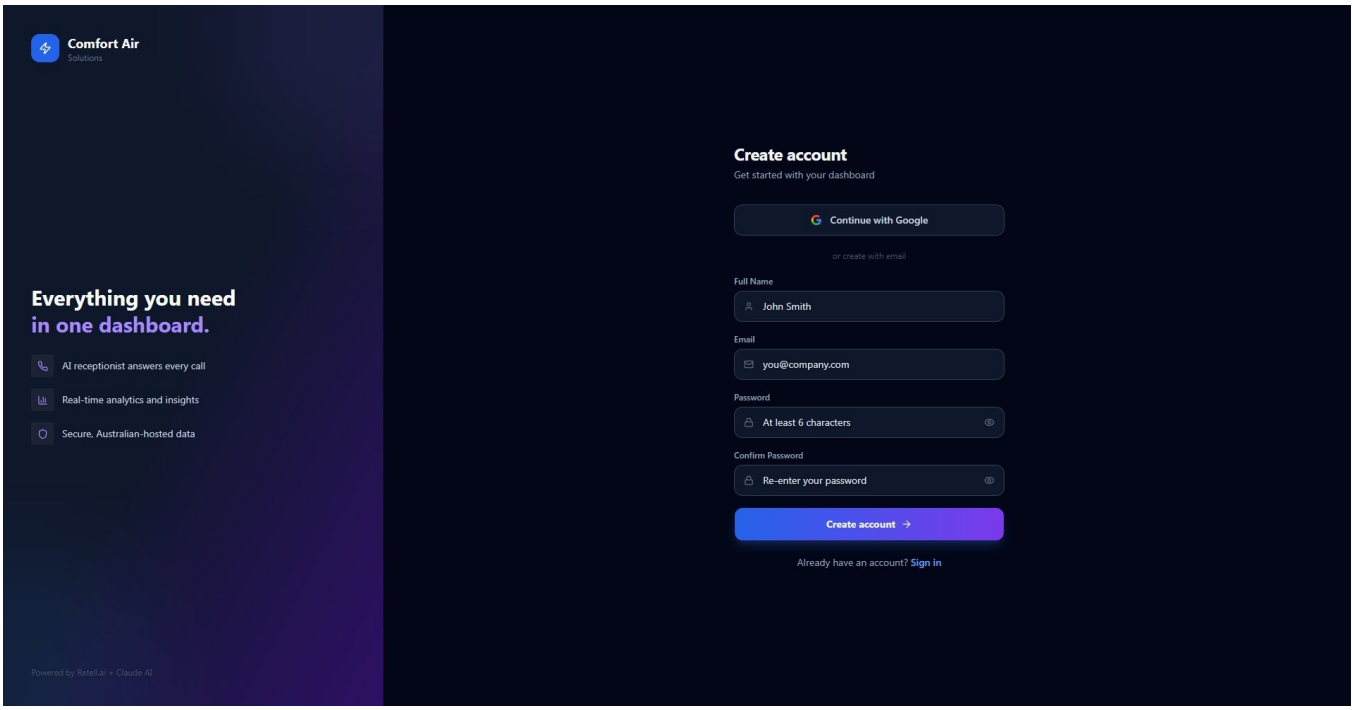
Australian HVAC Company · Production Deployment · Live Phone Number

| 21 | 8 | 4 | 5 | 3 | 24/7 |
|---|---|---|---|---|---|
| API Endpoints | Dashboard Pages | AI Tools | DB Tables | Integrations | Live Answering |

## Project Overview

Designed and built a complete **AI-powered telephone receptionist platform** for an Australian HVAC business. The system replaces a human front-desk operator: AI agent **"Aria"** answers every incoming call in warm Australian English, books service appointments, qualifies sales leads, handles FAQs, and escalates emergencies — while the business owner watches every call, booking, and lead stream into a live React dashboard.

The platform is **live in production** handling a real Australian phone number, with a fully deployed backend (Railway), frontend (Vercel), and database (Supabase PostgreSQL).




*Branded Auth Screen — Powered by Retell.ai + Claude AI*

## What I Built

### ■ Voice AI Agent (Aria)

Custom Retell.ai agent powered by Claude Sonnet 4. Hand-tuned system prompt, knowledge base, and 4 custom function-calling tools: book_appointment, capture_lead, check_availability, escalate_urgent.

### ■■ Backend API

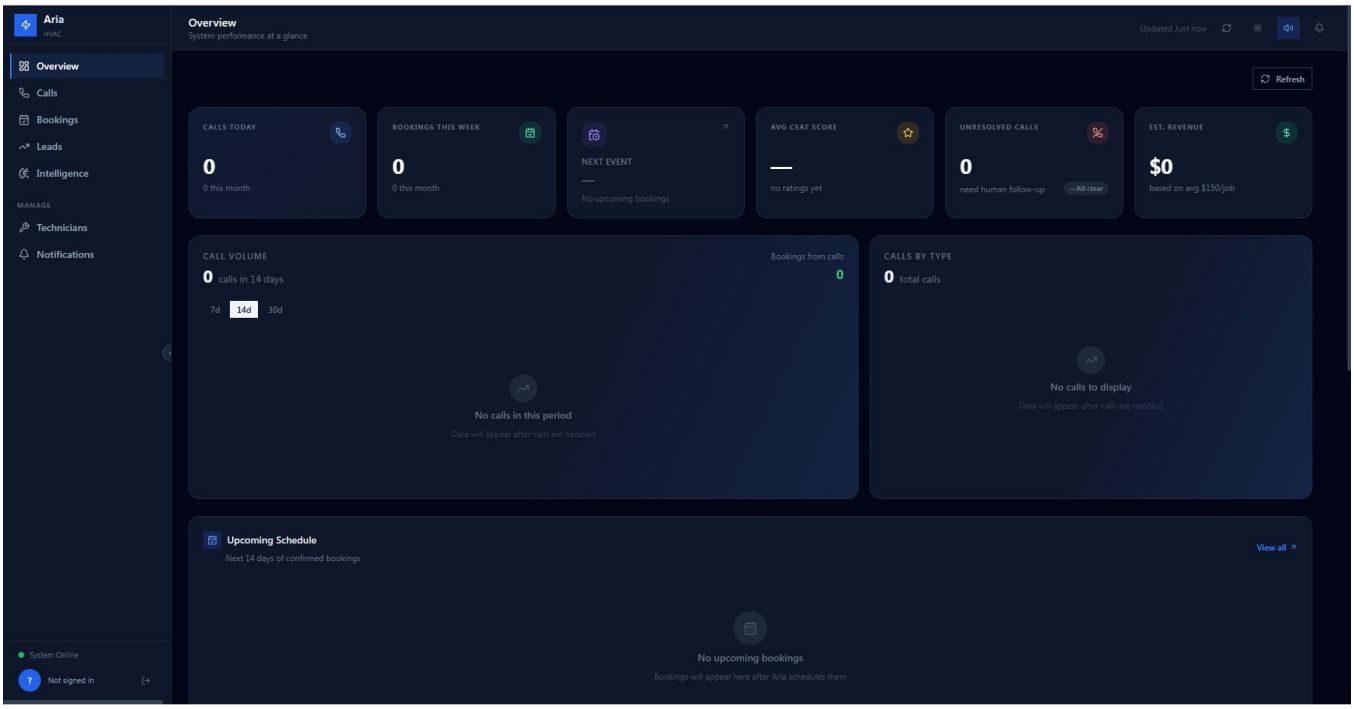
21 REST endpoints across 7 route modules — auth, bookings, leads, calls, dashboard analytics, notifications, and Retell webhooks. 21/21 route tests + 7/7 integration tests passing on production.

### ■ React Dashboard

8-page React app: dark mode, animated transitions, drag-and-drop lead pipeline, suburb heatmap, customer-tier intelligence (Platinum/Gold/Silver/New), and collapsible sidebar.

### ■ Telephony Stack

Retell.ai (voice) + Twilio (SMS confirmations) + Resend via n8n (email) — all wired through HMAC-verified secure webhooks with fire-and-forget async dispatch.




*Overview Dashboard — KPI Cards, Call Volume Chart, Upcoming Schedule*

## Key Features

✓ 24/7 inbound call handling in natural Australian English

✓ Automatic appointment booking with real-time availability checks

✓ Lead qualification feeding directly into drag-and-drop sales pipeline

✓ SMS confirmations sent instantly via Twilio after every booking

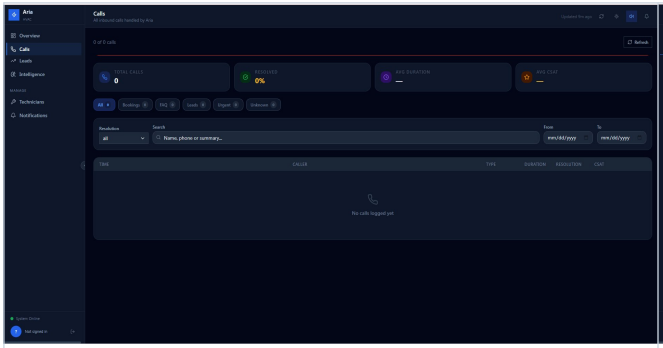
✓ Emergency escalation — no heat, gas leaks, urgent HVAC issues

✓ Business intelligence — suburb call rankings, hourly/daily heatmap

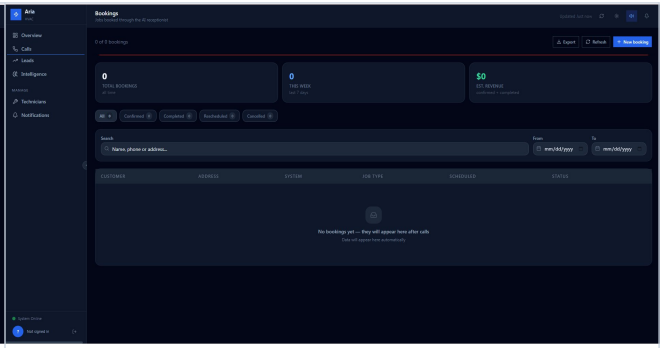
✓ Customer loyalty tiers — Platinum, Gold, Silver, New

✓ Full call transcripts, recordings, and outcome tagging per call

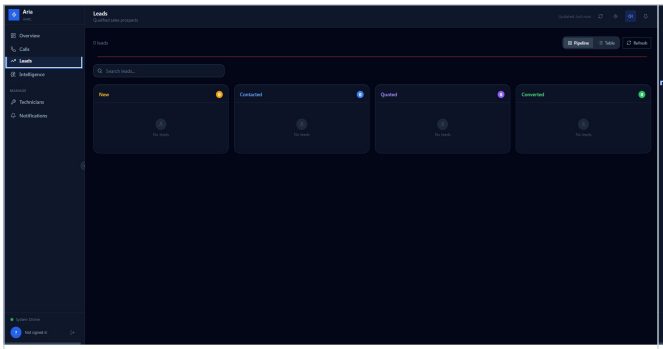
## Dashboard Screenshots



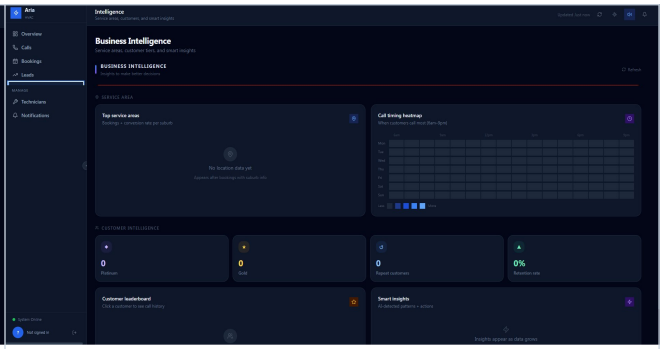
*Calls Page — Inbound Call Log with Type, Duration, Resolution & CSAT Filters*



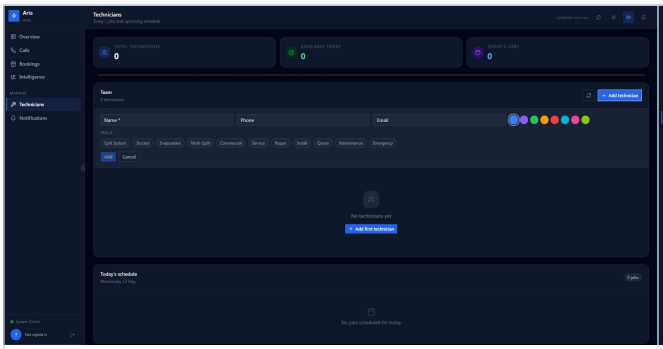
*Bookings Page — AI-Scheduled Jobs with Status Tabs & Revenue Tracking*



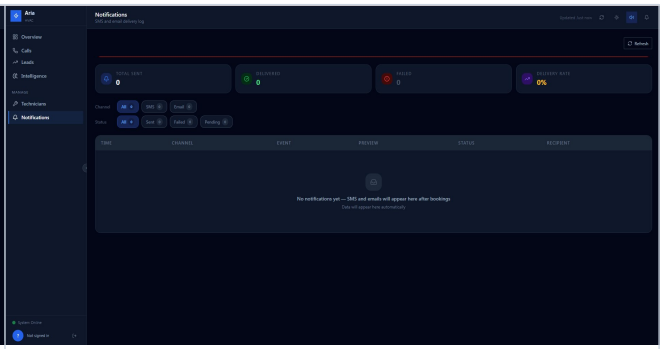
*Leads Pipeline — Drag-and-Drop Kanban (New → Contacted → Quoted → Converted)*



*Business Intelligence — Service Area Heatmap, Customer Tiers & Smart Insights*



*Technicians Page — Team Management, Skills & Today's Schedule*



*Notifications Centre — SMS & Email Delivery Log with Channel & Status Filters*

## Results & Business Impact

| Metric | Outcome |
|---|---|
| **~AUD $60K/yr** | Receptionist salary replaced by the AI agent |
| **Zero** | Missed calls — answers 24/7 including weekends and after-hours |
| **100%** | Of calls logged, transcribed, and categorised automatically |
| **Instant** | Owner SMS/email alert the moment a new lead or booking comes in |

## Tech Stack

| | |
|---|---|
| **Frontend** | React 19 + Vite, Tailwind CSS, shadcn/ui, React Router, Recharts, Supabase JS (realtime), dark mode via Context API |

| | |
|---|---|
| **Backend** | Node.js + Express.js, Supabase PostgreSQL (service-role admin), JWT auth middleware, REST API, HMAC webhook verification |
| **AI / Voice** | Retell.ai (hosted voice infra), Claude Sonnet 4 (LLM), ElevenLabs Adrian voice (Australian English TTS), 4 custom function-calling tools |
| **Messaging** | Twilio (SMS), Resend (email), n8n (workflow automation — booking events, reminders, lead alerts) |
| **Infrastructure** | Railway (backend), Vercel (frontend), Supabase (Postgres + Auth + Realtime), GitHub CI/CD, env-driven config |
| **Testing** | Automated route-verification suite: 21/21 endpoints passing + 7/7 integration tests in production |

## Ready to build your AI system?

Voice AI, real-time dashboards, custom integrations — production-grade, from day one.

**■ Message me on Upwork to get started.**

Senior Full Stack Developer · React · Node.js · AI Systems · Voice AI · $20/hr · Upwork

Project 03

# Pizza Funnel

# Restaurant SaaS Platform

Next.js 16 · Expo RN · Claude AI · Facebook Ads API · WhatsApp · Supabase

# Pizza Funnel — Multi-Tenant SaaS for Restaurants

**Next.js 16 · Expo React Native · Supabase · Claude AI · Facebook Ads API · WhatsApp Agent**

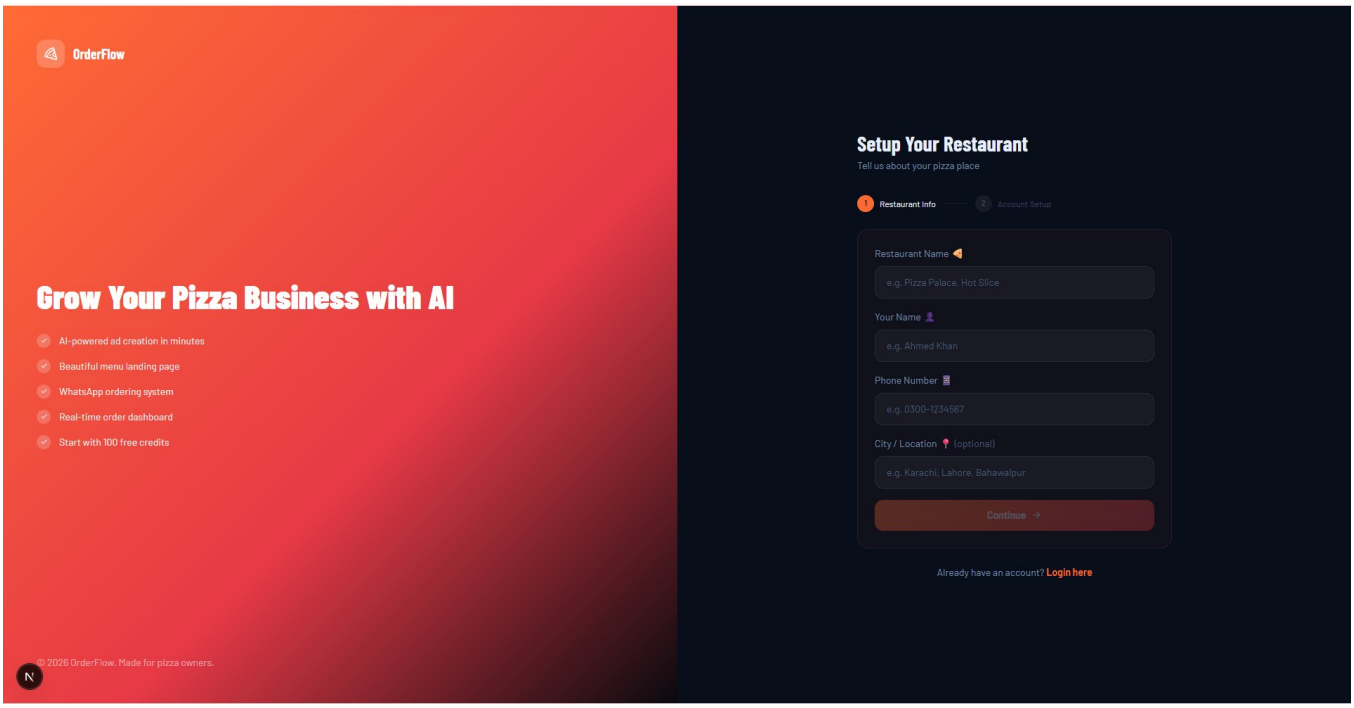
4 Role-Specific Apps · 108 API Routes · 30+ Shipped Phases · Production Deployment

| 108 | 4 | 23 | 5 | 30+ | 2 |
|---|---|---|---|---|---|
| API Routes | Role Apps | Dashboard Widgets | Cron Workers | Shipped Phases | Frontends |

## Project Overview

**Pizza Funnel** is a production-grade, multi-tenant SaaS platform that gives Pakistani pizza restaurants a complete digital operations stack — from customer acquisition through AI-generated Facebook ads, through ordering via a Claude-powered WhatsApp agent (in Roman Urdu), all the way to fulfilment via a kitchen display system and a delivery driver app.

I built the system **end-to-end**: backend (108 API routes), two frontends (Next.js 16 web + Expo React Native mobile), AI integrations, third-party APIs, multi-tenant auth, credit billing, and DevOps. The platform ships with **4 role-specific apps** — Owner, Kitchen Staff, Delivery Driver, and Super Admin — all sharing a tenant-isolated Supabase backend.




*Restaurant Sign-Up — Onboarding Flow (Grow Your Pizza Business with AI)*

## Key Features Built

### AI Facebook Ad Generator

3-step flow: goal selection → restaurant info → 4 AI-generated mockup ads. Claude Sonnet 4.5 writes copy; KIE.ai nano-banana-2 generates images async with polling. Direct Facebook Marketing API v21.0 integration with OAuth + ad-account picker.

### WhatsApp AI Ordering Agent

Server-side Baileys WhatsApp Web socket per tenant. Claude Sonnet 4.5 takes orders, upsells, and handles objections in Roman Urdu. Auto-replies on incoming calls. Full conversation monitoring + agent-config UI in owner dashboard.

### Kitchen Display System (KDS)

2-column Queue/Cooking layout, live clock, wait-time colour ramp. 15-second polling + browser notification + beep on new orders. PIN-based staff login with live tenant-name preview to prevent wrong-tenant logins.

### Delivery Driver App

Online/offline toggle, OTP-gated delivery confirmation (customer receives OTP via WhatsApp). Voice alerts in Urdu/Hindi, vibration, orange page-flash on new assignment. show_to_delivery_at gating for prep-completed orders only.

### Multi-Tenant Auth & Security

HttpOnly tenant_id cookie (web) + opaque 256-bit Bearer tokens SHA-256 hashed (mobile). Separate auth realms for all 4 roles. All routes verify + filter .eq('tenant_id') — never trusting client-supplied IDs. pick() helper prevents column-spread.

### Credit-Based Billing

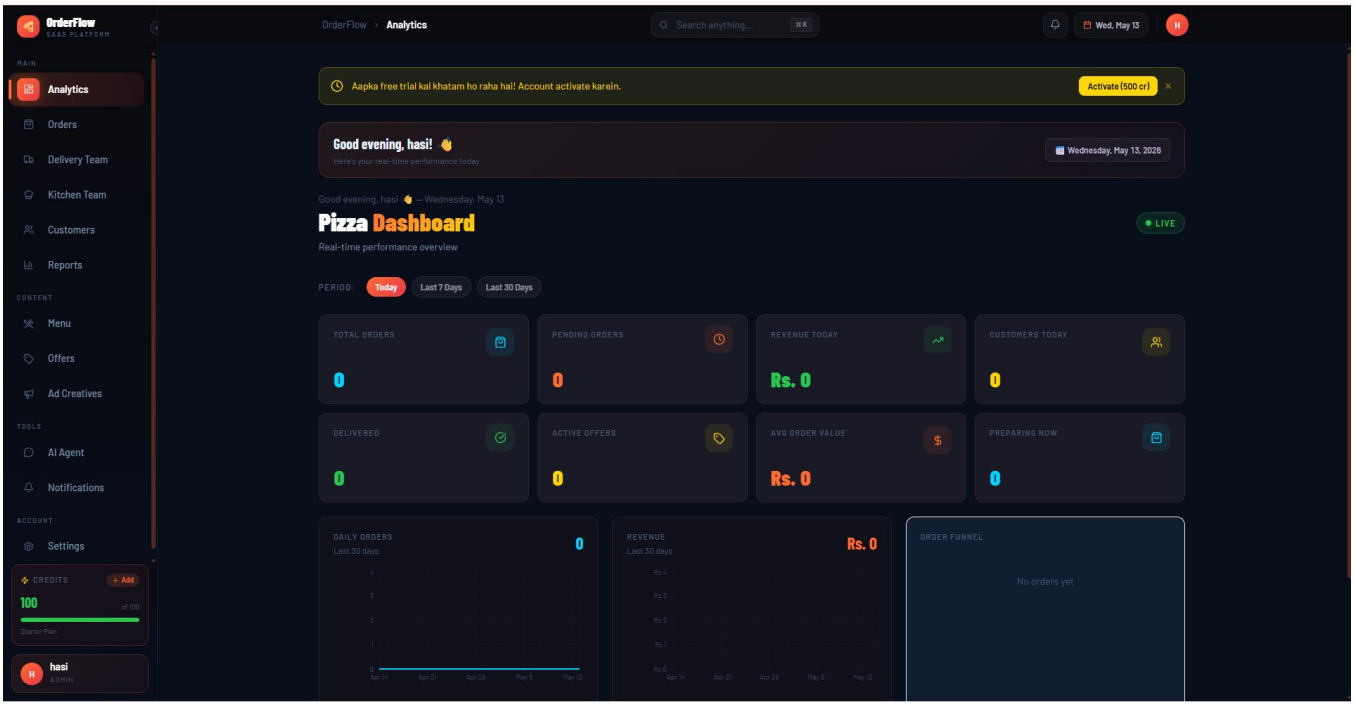
Atomic Postgres RPC (deduct_credits / refund_credits with SELECT FOR UPDATE). Credits deducted before external AI call to prevent free usage on failure. 402 status on insufficient credits; mirror refund path on API failures.

### Owner Dashboard (Web + Mobile)

Full feature parity across web and React Native. Analytics, orders pipeline, customers, menu CRUD, offers, ad library, reports, notifications, loyalty, WhatsApp agent config. 8-question onboarding + 5-step Copilot walkthrough tour.

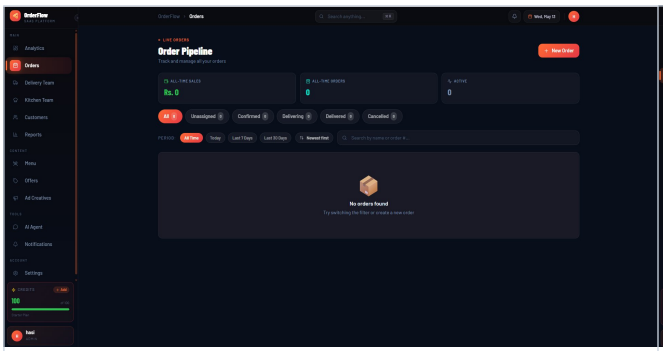
### Background Jobs & Automation

5 node-cron workers: session cleanup, customer re-engagement campaigns, watchdog, Facebook long-lived token refresh, and AI advisor. Deployed as Docker container on Railway with UptimeRobot health-check.

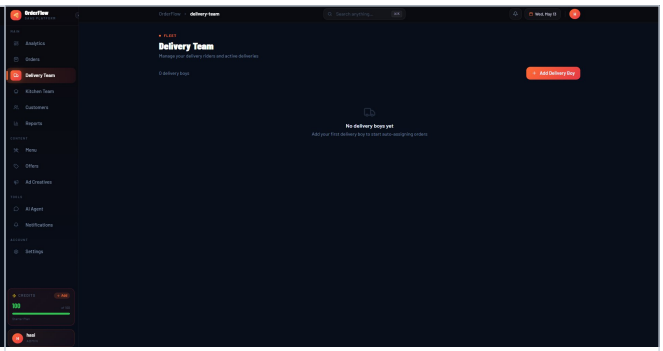



*Analytics Dashboard — Real-Time KPIs, Daily Orders, Revenue & Order Funnel*

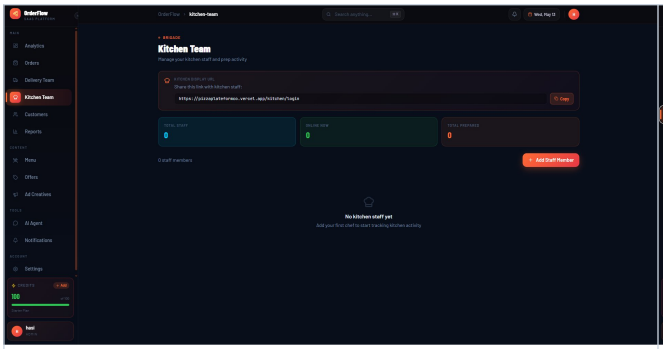
## Platform Screenshots



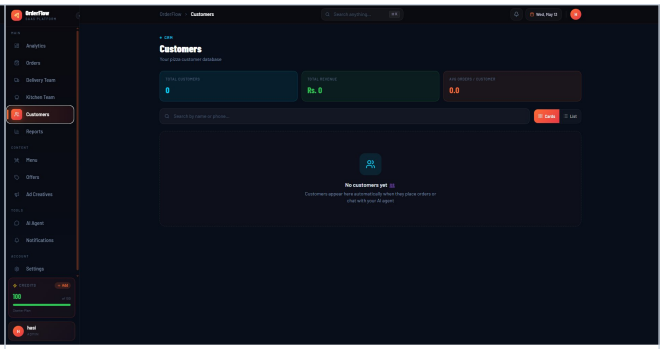

*Order Pipeline — Live Orders with Status Tabs & Period Filters*



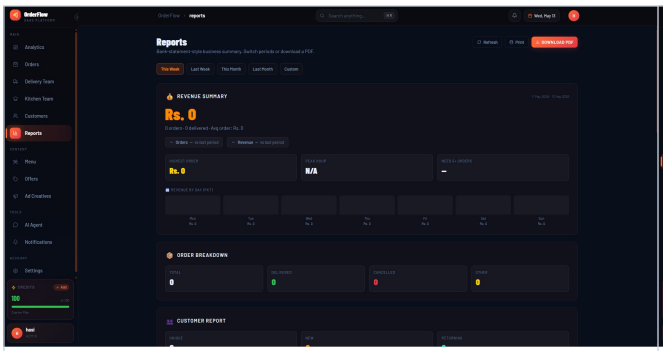

*Delivery Team — Fleet Management & Auto-Assignment*



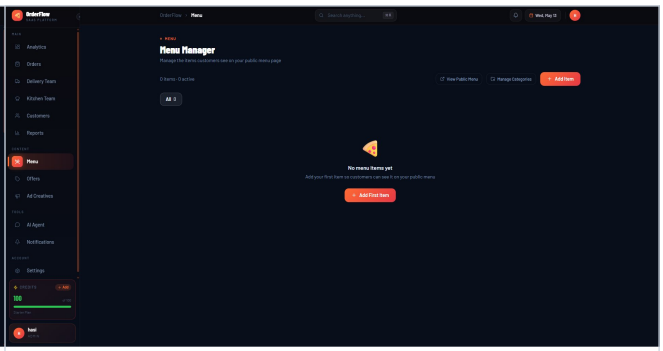

*Kitchen Team — Staff Management, KDS URL & Prep Tracking*



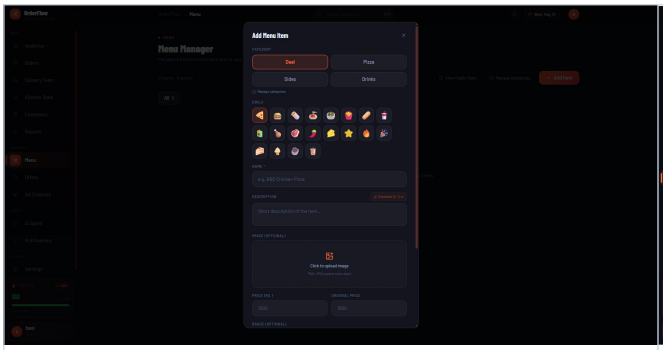

*Customers CRM — Customer Database with Total Revenue & Avg Orders*



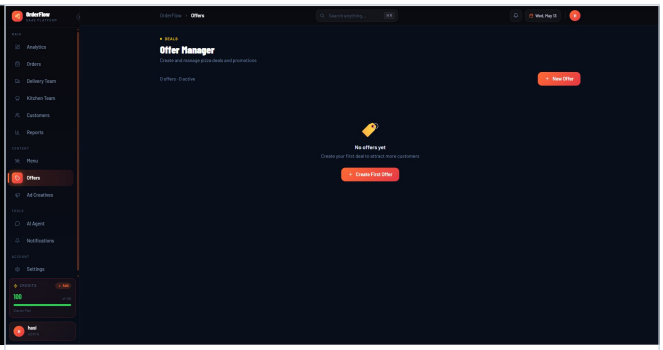

*Reports — Bank-Statement-Style Business Summary with PDF Export*



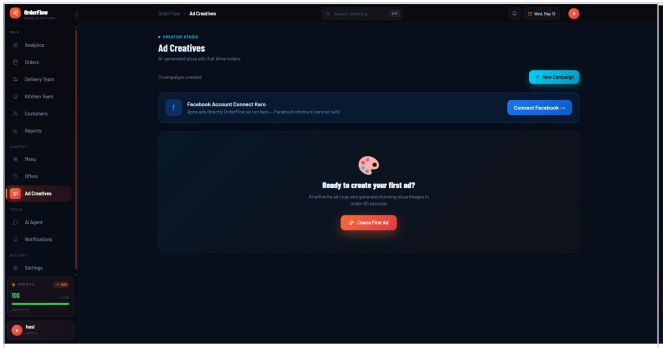

*Menu Manager — CRUD with Category, Emoji, Price & AI Description*



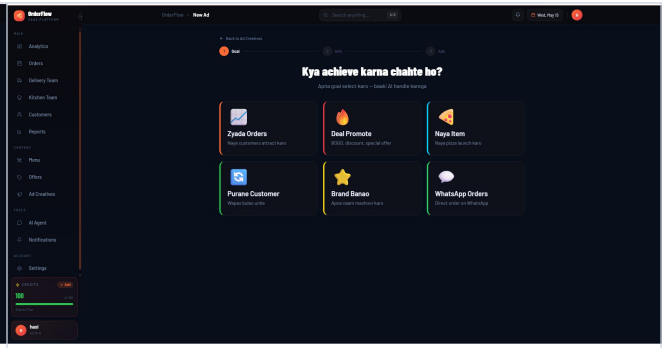

*Add Menu Item Modal — Category, Emoji, AI-generated Description*



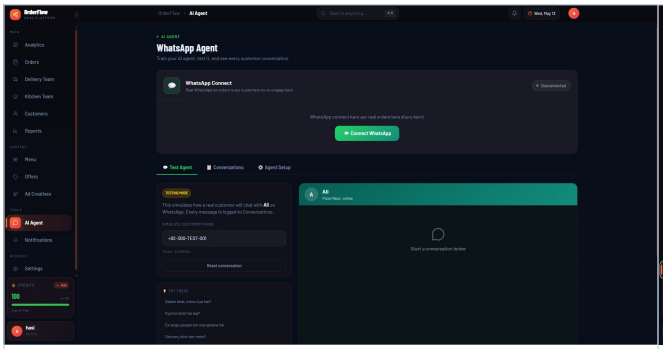

*Offer Manager — Deals & Promotions*



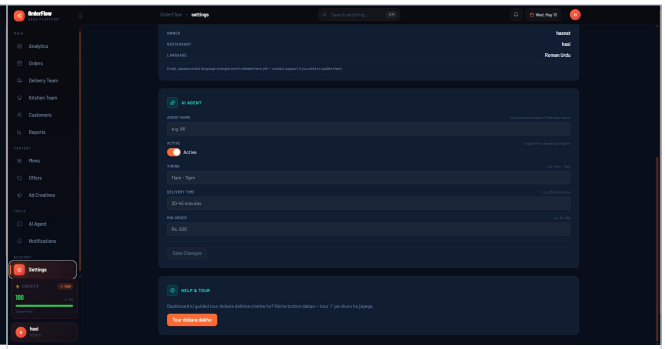

*Ad Creatives — Creative Studio with Facebook OAuth Integration*



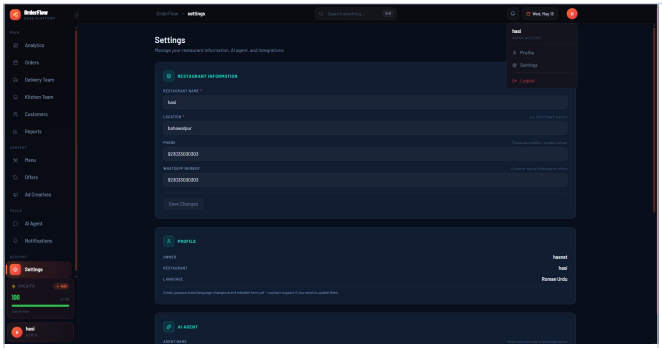

*New Ad — Goal Selection (Roman Urdu UI for Pakistani Restaurants)*




*WhatsApp AI Agent — Test Agent, Conversations & Agent Setup Tabs*



*Settings — AI Agent Config (Name, Timing, Delivery, Min Order)*




*Settings — Restaurant Info, Profile & AI Agent Configuration*

## Tech Stack

| | |
|---|---|
| **Web Frontend** | Next.js 16 (App Router), React 19, TypeScript 5 strict, Tailwind CSS, Framer Motion, Recharts, @react-pdf/renderer |
| **Mobile App** | Expo SDK 54 (new arch), React Native 0.81, expo-router, TanStack Query v5, NativeWind 4, react-native-reanimated v4, EAS Build |
| **Backend** | Next.js API Routes (108 endpoints), Supabase (Postgres + Auth + Storage), Atomic Postgres RPCs, Zod validation |
| **AI & Agents** | Claude Sonnet 4.5 (ad copy + WhatsApp agent), Claude Haiku 4.5 (spell correction), KIE.ai nano-banana-2 (async image gen) |
| **Integrations** | Facebook Marketing API v21.0 (OAuth, campaigns, ad accounts), @whiskeysockets/baileys (WhatsApp Web), Infobip SMS |
| **Infrastructure** | Vercel (web), Railway (Docker worker), Supabase, Sentry (client/server/edge), node-cron (5 workers), UptimeRobot |

## Skills Demonstrated

✓ Multi-tenant SaaS architecture from day one

✓ Next.js App Router + React Native Expo full-stack

✓ Claude AI integration — prompt engineering for Roman Urdu agent

✓ Facebook Marketing API OAuth + live ad campaigns

✓ WhatsApp Web socket (Baileys) — per-tenant session management

✓ Atomic credit billing with Postgres RPCs + SELECT FOR UPDATE

✓ TypeScript strict mode + Zod validation across 108 endpoints

✓ Docker worker deployment + 5 node-cron background jobs

✓ Role-based auth (4 realms) with HttpOnly cookies + Bearer tokens

✓ KIE.ai async image generation with polling architecture

## Ready to build your SaaS?

Multi-tenant platforms, AI integrations, mobile apps — production-grade from day one.

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