



Rowin Hernandez

Senior Software Engineer · Forward-Deployed AI Engineer · AI Agent
Infrastructure · TypeScript Full-Stack

rowin@kalebtec.com
github.com/rowinbot
linkedin.com/in/rowinbot
Vigo, Spain · Remote (Europe / CET)

SUMMARY

Thirteen years shipping production software, self-taught, professional since 2013. Deepest in **TypeScript across the stack** (React, React Native, Node) with production ownership of AWS: ECS/Fargate, Lambda, SQS, S3, CloudWatch, CDK.

Since March 2026 I've been building **agent infrastructure** at my own studio: an MCP-native browser-control server, a web agent whose steps only count once a separate screenshot judge agrees they did what the agent claimed, and a documentation pipeline that calibrates once with a model then replays at zero token cost. This is the layer underneath an LLM application.

Most of that studio work is forward-deployed: I embed with one client, in their codebase and their constraints, and own the outcome rather than a ticket. Recent engagements shipped a voice assistant into a French home-services product, a fuel-logistics platform, and a booking flow built against a third-party API with no hold primitive.

Before that, four years leading FanFest's live broadcast platform, where the hard part was staying correct while the systems underneath were slow, wrong, or down.

Based in Vigo, Spain, and **authorized to work here with no sponsorship required**. Available immediately, contract through my own studio or permanent.

TECHNICAL SKILLS

AI & agent systems: agent orchestration and typed tool contracts, LLM-as-judge evaluation gates, MCP (Model Context Protocol) servers and clients, code-as-action execution, deterministic replay and token-cost reduction, human-in-the-loop approval gates, Anthropic Claude API, OpenAI API, Playwright / CDP browser control, AI moderation and translation pipelines

Backend & APIs: Node.js, TypeScript, Express, GraphQL, tRPC, Prisma, PostgreSQL, MongoDB, Redis, BullMQ / SQS queues, webhooks and idempotent writes

Frontend & mobile: React 18, Next.js, Vue 3, Remix, React Native, Flutter, Astro, Svelte, Solid, Tailwind CSS

Cloud & infrastructure: AWS (ECS/Fargate, Lambda, S3, SQS, EFS, CloudWatch, CDK), AWS Elemental MediaLive / MediaPackage / CloudFront, observability: CloudWatch dashboards, alarms and alerting, Docker, Serverless Framework, Kubernetes, Helm, Argo CD GitOps, GitHub Actions, GitLab CI, Fly.io

Languages: TypeScript, JavaScript, SQL, Ruby, Dart

Also shipped in: Python (scripting and tooling, not production services), Go, Rust, Java (Android), Swift (platform channels)

Domains: AI agent infrastructure and developer tooling, live sports media and broadcast, HR tech and people analytics, travel, tourism and booking platforms, hospitality operations, healthcare, digital identity and wallets, marketplaces, knowledge graphs, agtech and autonomous systems, edtech, market intelligence, gamification and loyalty, enterprise communications

EXPERIENCE

Founder / Principal Engineer · [Kalebtec](#)

Mar 2026 – Present

Stack: TypeScript, Rust, MCP (Model Context Protocol), Anthropic Claude API, OpenAI API, Playwright/CDP, Zod, Node.js, React, Next.js, pnpm monorepos, AWS, Fly.io

- **browxai** ([public](#), [MIT](#)): an MCP-native, model-agnostic browser-control server giving a model a token-efficient Playwright and CDP surface: capability-gated tool contracts typed in TypeScript with Zod, compact page snapshots in place of raw DOM, per-session engine selection. It is the substrate the rest of the suite runs on.
- **wrightxai**: a web agent on browxai that writes and runs a short script per step (code-as-action) rather than one tool call per step. A **screenshot judge has to independently agree a step did what the agent claimed before it counts**, and judged runs then replay deterministically at zero model tokens, so only exploration costs anything. Evaluated against hard pass/fail gates with screenshots, metrics and replay artifacts.
- **docsxai**: documentation automation that walks an application once with a model, then replays the calibrated flow with no model calls at all to emit screenshot-rich docs, Confluence ADF and Astro/Starlight sites. Ships as an MCP server and a Claude Code plugin, with a GitHub App webhook surface and OAuth 2.1 PKCE for CI.
- **remotxai**: remote supervision for long-running coding-agent sessions. A Rust host daemon, an end-to-end encrypted WebSocket relay, operator approval and queue control, runtime adapters, and a mobile-first PWA, so a sensitive local agent run can be watched and interrupted from a phone.
- **Bardi Fuels**: a private market-intelligence platform for oil, gas and biofuels traders: real-time prices, bids and offers, newsletters, trade recaps; shipped to the App Store via Fastlane.
- Rust reference toolchain (parser, validator, normalizer, CLI, eval harness, repository-aware reference checking) for a structured specification format that gives agents reliable context.

Lead Software Engineer · [FanFest](#)

Nov 2024 – Jul 2026

Stack: AWS Elemental MediaLive, MediaPackage, CloudFront, ffmpeg, AWS (ECS/Fargate, S3, SQS, EFS, Lambda, ALB, CDK), Vue 3, TypeScript, GraphQL, Prisma, Stripe, OpenAI, Ably, Socket.io, viem

- Built and owned the Simulcast live-broadcast pipeline on AWS Elemental MediaLive, HLS/LL-HLS channel templates, multi-bitrate encoding ladders (270p–2160p), RTMP ingest, Lambda channel lifecycle, MediaPackage packaging, and CloudFront delivery, alongside an Amazon Chime layer for live interactive participants, with a Serverless backing management API and CloudWatch alarms via AWS CDK.
- Owned that pipeline through its migration to a self-hosted ffmpeg encoding stack on ECS Fargate, headless-browser capture, a three-rung H.264 ABR ladder, HLS packaging, and simultaneous RTMP fan-out to YouTube, Facebook, X, and TikTok from a single encode.
- Rebuilt the pipeline's reliability layer end-to-end: a validated lifecycle state machine, 10-second health heartbeats, an automatic replacement-instance watchdog with optimistic locking and bounded retries, and resume-from-object-storage so a mid-show container failure is stitched back into one continuous recording.
- Designed failure handling for the failure handler, an object-storage circuit breaker that suppresses replacement launches when the backing store is itself the fault (preventing an infinite recovery loop), disk-pressure segment cleanup that never touches the live edge, and a bounded shutdown flush that checkpoints progress for post-processing.
- Built an origin-health probe catching the "healthy heartbeat, dead origin" failure class, paired with client-side player failover between redundant landscape/portrait origins so viewers switch streams instead of seeing a blank player.
- Delivered live fan-engagement features for global sports partners: PSG, Manchester City, the 49ers, AC Milan, and OG Sports, serving tens of thousands of fans across live events.
- Built and hardened high-scale real-time systems: live chat, loyalty queues, AI translation pipelines, Stripe membership flows, and k6/ECS load-testing infrastructure (validated to 20,000 virtual users).
- Implemented wallet-based identity and access-gating flows with Viem and Reown WalletConnect/AppKit; integrated AI moderation and content safety via OpenAI.
- Built the OG Sports CMS-backed esports website (Next.js 15, Payload CMS 3, PostgreSQL) covering teams, players, matches, news, shop, and FanFest SDK embed.

Senior Frontend Engineer · [WSC Sports \(Clipro\)](#) (Contractor)

Aug 2025 – Jun 2026

Stack: React, TypeScript, Vite, Redux, Jest, Playwright

- Sole frontend engineer on the **AI voiceover domain of Clipro** for close to a year, a product used by the NBA, ESPN and 300+ broadcasters and rights holders that generated over 8 million AI-produced clips in H1 2025.
- Owned that domain end to end with no stand-ups: talked directly to product and backend, wrote the plans, made the design calls, from spec through to production.
- Re-architected the AI voiceover frontend onto an async, job-based model and kept evolving it, which fixed the reliability problems and the producer editing workflow that the synchronous design had created.
- Ran frontend technical reviews and planning across the squad's work: scoping and estimating features, surfacing delivery risks early, and aligning frontend/backend contracts so the team could build with confidence.
- Built and polished complex editor UX across the voiceover and article-to-video (A2V) surfaces, turning Figma designs into responsive, interaction-rich interfaces (timeline flows, resizable panels, media controls, multi-step modals) with attention to edge cases and reliability.
- Onboarded and mentored the incoming frontend engineer, ran technical interviews for frontend candidates, and grew automated test coverage with Jest and Playwright.

Lead Software Engineer · [FanFest](#)

Nov 2023 – Nov 2024

Stack: Vue 3, TypeScript, GraphQL, Prisma, AWS, pnpm monorepo, Socket.io, OpenAI

- Led a team of 6 engineers architecting FanFest v3, a Vue 3/TypeScript/GraphQL/Prisma/AWS pnpm monorepo replacing a split-repo Vue 2/Parse Server/GCP stack.
- Delivered architecture for live chat, memberships, loyalty, SDK embeds, AI-enabled moderation, and Simulfest recording operations; established shared TypeScript packages across frontend, API, and SDK apps.

Mobile Engineer, Identity & Digital Wallets · [Ping Identity](#) (Contractor)

Mar 2024 – Jul 2024

Stack: Flutter, Dart, Swift, Java, verifiable credentials, DID, BLE, QR, APNS, Firebase, TestFlight

- Built a cross-platform mobile proof-of-concept in the digital-identity space, verifiable-credential issuance, storage, verification, and presentation flows across iOS and Android.
- Implemented native platform channels for Swift and Java SDK bridging; delivered credential presentation over BLE and QR with passkey-backed authentication and TestFlight distribution.

Full-Stack & Infrastructure Engineer · [MeetingPoint \(Aliates\)](#) (Contractor)

May 2022 – Apr 2024

Stack: Remix, React, TypeScript, Node.js, Kubernetes, Helm, Argo CD, cert-manager, WireGuard, PostgreSQL, Docker

- Built the customer-facing booking experience for a Morocco-based travel and tourism platform in Remix: tour listing and detail pages, availability calendar flows, responsive layouts, and the API integration behind them.
- Owned the platform's **Kubernetes GitOps infrastructure** across production, cluster-level and experimental workloads: Helm app-of-apps over three repositories, rolling-update capacity for zero-downtime deploys, cert-manager ingress access control, gateway timeout tuning, and a WireGuard VPN for cluster networking.

Senior Full-Stack Engineer · [Limbic AI](#) (Contractor)

Oct 2023 – Feb 2024

Stack: Next.js, React, TypeScript, Node.js, PostgreSQL, MongoDB, BullMQ, AWS

- Delivered features on a UK mental-health screening and patient management platform, working on structured chatbot dialogue flows and rule-based risk detection within clinical safety constraints.
- Built a queuing system with retries for emergency notification flows and time-traveling dialogue state management.

Senior Software Engineer · [GraphAware \(Hume\)](#) (Contractor)

May 2023 – Sep 2023

Stack: Vue 2, TypeScript, Java, Spring, Neo4j, Playwright, Cypress, Vuetify, Testcontainers

- Delivered features for Hume, an enterprise knowledge-graph platform supporting graph exploration, geospatial analysis, schema management, alerting, and orchestration workflows.
- Wrote and maintained E2E test suites in Java Playwright and Cypress covering complex canvas-based graph editor interactions.

Software Engineer · [Sabanto](#) (Contractor)

Sep 2022 – Mar 2023

Stack: React, TypeScript, deck.gl, Mapbox, Turf.js, GeoJSON, nebula.gl, Storybook, AWS Amplify

- Built a geospatial mission-control system for monitoring autonomous tractor operations, map layers, field routes, telemetry overlays, and GeoJSON-based field planning tools.
- Implemented editable GeoJSON field boundaries with nebula.gl, Mapbox satellite imagery integration, and real-time tractor position telemetry overlays.

Software Engineer · [FanFest](#) (Contractor)

May 2022 – Jan 2023

Stack: Vue 2, TypeScript, Parse Server, MongoDB, Redis, Socket.IO, HLS.js, GraphQL, Stripe, GCP App Engine, Docker

- Built and maintained live fan-engagement features: real-time chat, event gating, notifications, and HLS/Phenix media streaming on a platform serving PSG, Comcast, and Premier League.
- Implemented event gating and feature-flagged notifications enabling controlled access-control rollout for live audiences.
- Deployed and operated backend services on GCP App Engine (Docker), using AWS S3 for storage and Elemental-adjacent tooling for VOD; all application compute ran on GCP.

Frontend Engineer · [Humantelligence](#)

Aug 2023 – Nov 2023

Stack: React, TypeScript, Vite, Turborepo, pnpm, react-jss

- Led web frontend modernization: migrated the legacy ejected-CRA/Webpack codebase to a TypeScript + Vite + Turborepo/pnpm monorepo, delivering a 10x improvement in development and deployment performance (client-reported).

Lead Software Engineer · [Synphonyte](#)

May 2020 – Jan 2024

Stack: Vue, Nuxt, React, Next.js, Remix, Flutter, TypeScript, Node.js, Go, Django, Prisma, PostgreSQL, Rust/WASM, Kubernetes, IBM Cloud, LitElement

- Led development across multiple concurrent client products over 3.5 years, managing a team of up to 7 engineers.
- Delivered **Ona**, a **hotel administration and operations platform** for a hospitality operator: Remix and Prisma over PostgreSQL, with occupancy and availability dashboards, date-range filtering, and room-type charting across MUI, Recharts, Chart.js and D3. Management and analytics side of the business rather than frontline staff tooling.
- Built **Messynger**, a multi-channel customer-support aggregation platform unifying WhatsApp, Messenger, Slack, and MS Teams on IBM Cloud with Nuxt.js and IBM Cloudant.
- Delivered **Voxel** (for Slicaray), a browser-based dental 3D imaging platform with Three.js/WebGL2, Rust/WASM geometry, volumetric scan interaction, and pixelmatch render-diff automation.
- Built **Soku**, a mobile app, admin tooling, web interfaces, and 3D asset management system with config-driven admin generation.
- Delivered **Sunliner**, a Next.js travel booking portal for a Dutch holiday park operator covering holiday package search, availability calendars, booking flows, and an admin dashboard (Material UI, React, Next.js, SASS).
- Published `@synphonyte/airplane-seat-picker` as a standalone LitElement Web Component (npm).
- Delivered **Solhop**, a travel booking platform; maintained and extended the legacy PHP website and admin panel, built a new Next.js/Tailwind admin, and wrote a Deno/Puppeteer scraper for hotel data ingestion from TripAdvisor.
- Built a cross-browser (Chrome + Firefox) WebExtension integrating StartInfinity project management with Harvest time-tracking for internal Synphonyte use.

Mobile & Frontend Engineer · [Humantelligence](#)

Oct 2018 – Nov 2021

Stack: React Native, TypeScript, iOS, Android, React, Redux, Ruby on Rails, MongoDB, Sidekiq, Redis, Firebase, CodePush

- Three years on an **HR-tech / people-analytics product**: culture and personality assessments, team collaboration insight, and every employee-facing surface around them.
- Built the consumer mobile app (iOS and Android) in **React Native** from inception and owned it end to end: onboarding, assessment flows, store releases on both platforms, CodePush/AppCenter OTA updates, Crashlytics triage, permissions, and a state-layer rewrite onto hooks.
- Put culture insight inside the tools employees already had open: a **Chrome extension embedding it directly into Gmail and Google Calendar**, plus Zoom, Teams and Webex integrations. The employer bought the product and the employee owed them nothing, so adoption was the real engineering problem.

- Maintained and extended the Rails 5.2/MongoDB/Sidekiq consumer API: user management, assessments, subscriptions, push notifications, and portal.humantelligence.com integrations.

Full-Stack & Mobile Engineer · Aliates

Sep 2016 – Aug 2020

Stack: Ruby on Rails, Java, Android, Vue 2, Vuex, Vue Router, React, React Native, Redux, Svelte, JavaScript, iOS, Firebase, Retrofit 2, OkHttp, PostgreSQL, Heroku, CodePush, AppCenter

- Built **RAC Rental-Car Broker**, native Java Android agent app (booking wizard, paginated bookings list, Firebase FCM), Vue 2/Vuex back-office admin (agreements, zone pricing, companies, insurances, extras, taxes), and a React Native rewrite (iOS/Android) with CodePush/AppCenter OTA updates; also delivered RAC Lite workflows and a React admin dashboard.
- Built **Tricampa**, a parking-lot fleet management system for Tenerife: Java Android agent app and Rails API enabling vehicle check-in/check-out, real-time GPS tracking, and movement lifecycle management.
- Built **Palma Alquileres**, a property listings site for Palma de Mallorca with Google Maps clustering, JWT auth, and image uploads, deployed to Heroku.
- Delivered **Sunliner/Sundeal** portals and admin tooling for a Dutch holiday park operator (React, Material UI); work transitioned into Synphonyte.
- Delivered **PeterTours** (Svelte travel-search frontend with carousel and search components) and **Isropa** (React web application).

Full-Stack & Mobile Engineer · Learapido

May 2018 – Feb 2020

Stack: Ruby on Rails, React, React Native, Expo, Flutter, Dart, Node.js, Express, GraphQL, Firebase, MongoDB

- Built backend and product systems for a language training platform, Rails APIs covering training routines, diagnostics, subscriptions, activation codes, and user management; Node/Express microservice for auth and service routing.
- Delivered two generations of mobile app (React Native/Expo → Flutter) with onboarding, auth, activities, diagnostics, Firebase dynamic links, and in-app purchases; built React/GraphQL admin for content and user management.

Earlier experience · Artmobile Technologies · YourKar · Parrolabs · VoiceBunny

Sep 2013 – Nov 2019

Stack: Ruby on Rails, AngularJS, CoffeeScript, React, Vue 2, Express.js, D3.js, PostgreSQL, Redis, Heroku, AWS

- **Artmobile Technologies** (2013 to 2015), full-stack on **GamyGame** and **Prematch**, two deployed gamification and loyalty platforms: rankings and badge systems, a versioned JsonScript engine with an embedded CodeMirror editor, a scheduled-worker mail daemon, and a D3.js engagement dashboard. Architected and ran the AWS infrastructure migration (Unicorn, autoscaling, CDN assets, Redis) and ported it to the second platform.
- **YourKar** (2013 to 2017), full-stack on a travel booking platform: end-to-end bookings and lifecycle management, zone and cost-group pricing, search, Devise authentication and role-based authorization built from scratch, and an API authentication layer with a dynamic API editor.
- **Parrolabs** (2017 to 2018), built the **Telemundo Atlanta** React and Express.js site with its Heroku staging/production pipeline, SEO metadata and analytics; refactored a Colombian coding-bootcamp React app onto HOC patterns.
- **VoiceBunny** (2019), Vue 2 landing page and portal for a voice-over marketplace.

OPEN SOURCE & SIDE PROJECTS

Pathway

Apr 2023 – Jul 2024

Stack: Astro, Svelte, Solid, Socket.io, Node.js, Express, TypeScript, pnpm monorepo

- Built a real-time multiplayer board/card game with Socket.io backend, shared TypeScript game logic, and a multi-framework frontend using Astro, Svelte, and Solid.

Published npm packages

2024 – 2025

Stack: TypeScript, Rollup, sharp, Serverless Framework, AWS EventBridge, SQS

- `rollup-image-blur`, a Rollup plugin generating importable image metadata and blur placeholders for progressive loading. `serverless-offline-eventBridge-v2`, extending the Serverless Offline EventBridge plugin with SQS, GetAtt resolution and LogGroup targets for local AWS emulation.

EDUCATION & CERTIFICATIONS

Self-taught, 13 years of continuous professional practice since 2013, programming since 2010.

Certifications: Apollo Graph Developer Associate & Professional (2023) · Tigera Calico Kubernetes Networking & Security (2023) · Argo CD GitOps (2023) · Observe Practical Observability (2023)