

Carson Conception Rodrigues

Full-Stack Software Engineer · Forward Deployed Engineer · Voice AI & LLM Pipelines · Distributed Systems

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Open to relocation & employer sponsorship — UAE / Dubai · UK · EMEA · remote

SUMMARY

Forward-deployed software engineer who architects robust AWS cloud infrastructure and LLM / voice pipelines to power end-to-end AI applications. Drives cross-platform product delivery (iOS / Android / Web) with a heavy focus on backend scalability, observability, and performance optimization. Shipped three US client products, notably reducing voice-AI latency by **41.8%** and boosting ASR intent accuracy to **91.7%**. Externalized production engineering work into **6 research papers**, including a **peer-reviewed acceptance at ICANN 2026**.

EXPERIENCE

Senior Software Engineer, Forward-Deployed (Contract) **Sep 2023 – Apr 2026**
VoiceQube Inc. (client engagements) — phiny.ai · northway-tech.com *Remote (US)*

- Sole client-facing engineer across three overseas (US) client engagements — ran requirements / discovery calls, translated needs into specs, scoped and assigned work across the team, and owned third-party integrations (Stripe / Razorpay / Apple Pay, OAuth, Calendly, Brevo, Twilio, Apify, Tesseract OCR) through to delivery.
- Built and shipped three production AI products end-to-end: **Phiny.ai** (Smart Recruiter unified backend, NestJS, **516 TS files** / **~101k LoC**; Python WebRTC voice microservice **~17k LoC** — FastAPI + Pipecat + LiveKit + Claude + ElevenLabs + Deepgram), **Crosslane** (476 TS files / **~107k LoC** across 13+ feature modules), and **Northway Tech** (AI voice caddie featuring 2× US Open champion Andy North).
- Architected an event-driven, distributed backend serving real-time interactions across **40,000+ locations** — NestJS + WebSocket real-time layer, **MongoDB geospatial** indexing for live GPS, Redis caching, BullMQ queues, and AWS SQS, built for high availability under high traffic.
- Owned **AWS infrastructure** end-to-end: EC2 / EBS, **Lambda + MediaConvert** media pipelines, **CloudFront** CDN edge delivery, S3 / SES; Route 53 DNS + Nginx SSL, load balancing; **Terraform** IaC and CI/CD via **GitHub Actions + AWS CodeCommit**.
- Built the live voice-agent stack — **LiveKit + Pipecat + ElevenLabs** (TTS) + **Deepgram** (ASR) + **Anthropic Claude** (intent detection); production observability with Prometheus + Grafana + Sentry + PostHog.

Senior Full Stack Engineer & Team Lead **Jan 2025 – Dec 2025**
Ôdasie (Water of Asia) *Remote · Thailand on-site*

- Led a **team of 6 engineers** (architecture + code reviews, mentorship) and shipped **5+ production AI systems** — LLM pipelines (GPT-4 / Claude / Gemini), real-time voice agents, **MCP servers**, and geospatial processors.
- Designed cloud architectures on **AWS** (EC2, S3, SQS, Lambda, Bedrock) + Netlify + Coolify and CI/CD pipelines that cut release cycles from **weeks to hours**; adopted **Claude Code** into the team's daily build / test / ship loop.
- Built LLM-powered automation — heavy **n8n** orchestration + approval workflows, vector search (Al-golia), model fine-tuning, and custom Python microservices; bi-directional **real-time AI avatars** on **LiveKit + WebRTC** (voice + video + data).
- Primary technical bridge across multiple agencies, **on-site in Thailand** (2 visits, ~1 month) — licensing setup, API integrations, and partner coordination.

Co-Founder & Technical Lead **Jan 2026 – Present**
CELABE — celabe.com · [App Store](https://play.google.com/store/apps/details?id=com.celabe) · [Play Store](https://play.google.com/store/apps/details?id=com.celabe) *Remote*

- Co-founded a multi-market AI wedding / events platform; built the full stack across iOS, Android, web, and the vendor ecosystem on **NestJS, React Native (Expo), Next.js, MongoDB, AWS, Stripe**.

- Shipped ML-powered planning, viral QR photo-sharing, and real-time vendor coordination; own the architecture, CI/CD automation, and technical roadmap as founding engineering leader.

Application Developer

Oct 2023 – Oct 2024

Siemens Ltd.

Verna, Goa

- Engineered enterprise IoT desktop apps (**20k+ LoC, 1,000+ Jest tests**) on Angular, Electron, RxJS, NestJS, RxDB, Python, and MQTT pub/sub; concurrent schedulers delivered **~3× performance** and cross-platform device support **8×**.

APPS SHIPPED — IOS + ANDROID

- **CELABE** — AI wedding & events platform ([iOS](#) · [Android](#)).
- **SmokeMukti** — ICMR-funded tobacco-cessation app with an AI coach (Gemini); **1st & 3rd Place AIDEC**, ICMR Short-Term Studentship ([iOS](#) · [Android](#)).
- **Oravira** — oral health × HIV behavior-change app ([iOS](#) · [Android](#)).
- **Amorelle** — AI-native couples app ([amorelle.ai](#)) · **Nourish** — AI nutrition / calorie tracker · **Foodiemama** — AI food & recipes · **Coco**.

All built solo on **React Native (Expo)** with Supabase / NestJS backends.

SELECTED PROJECTS & OPEN SOURCE

Brilliance — Academic Operations Platform

[dev.23yards.com](#)

End-to-end **10-app monorepo** (**4,159+ TS/JSX files**) for Indian junior colleges — JEE / NEET / CLAT / IPMAT. Hono backend (18 route modules), Drizzle ORM (25+ tables), PostgreSQL + Redis, Claude API for AI question generation, RBAC + JWT + OTP, MSG91 / FCM, Sentry, with **event-driven Claude Code agent orchestration** embedded in the dev workflow.

Open Source

[everything-claude-code](#) — merged PR into one of the fastest-growing agent ecosystems (**199k+ stars, 10k+ forks, 90+ contributors**) · **Qubekit** — LiveKit + Pipecat voice-stack reference implementation · **CP Studio AI** — TypeScript VS Code / Cursor extension.

RESEARCH & PUBLICATIONS

6 papers authored (2026) on production AI systems — the same stack shipped:

- **Latency Optimization for Voice AI** — **accepted, ICANN 2026** (peer-reviewed, ~37% acceptance; Padua, Italy). Demonstrates a **-41.8%** end-to-end latency reduction, anchoring the 40,000+ locations production system.
- *Under review / in submission:* **ASR Intent Detection at Scale (41.7% → 91.7%)** · **MCP Server Architecture Patterns** · **LLM Optimization for TensorFlow (+5.6 pp)** · **Trust in LLMs** · **Multi-Agent Drift**.

EDUCATION

B.E. (Honours), Computer Engineering — Don Bosco College of Engineering, Goa · **CGPA 9.28** · *Best Outgoing Student Award*. Chairman, C-Codes (Students' Council); organised INSPIRUS 2K21, a national tech event with 300+ participants.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, Java, C++

Voice AI: LiveKit, Pipecat, Deepgram, ElevenLabs, WebRTC, WebSockets, SSE, real-time avatars

AI / LLMs: GPT-4, Claude (Anthropic SDK), Gemini, OpenRouter, AI SDK, RAG, vector search, fine-tuning, **MCP servers**, agentic pipelines, Claude Code (production + OSS), n8n

Backend: NestJS, Node.js, Hono, Express, FastAPI, microservices, event-driven architecture, BullMQ

Frontend: React, Next.js 15, React Native (Expo), Tailwind, shadcn/ui, Framer Motion

Data: PostgreSQL (Drizzle), MongoDB (Mongoose, geospatial), Redis, vector databases, RxDB

Cloud / DevOps: AWS (EC2, S3, Lambda, SQS, Bedrock, CloudFront, RDS, ElastiCache), Docker, Terraform, GitHub Actions, Cloud Run, Coolify · **Observability:** Sentry, Prometheus, Grafana, PostHog