

# HANIF CARROLL

## Fullstack AI Engineer | I Build Products for Startups

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## Summary

I help early-stage founders ship ambitious products. Solo-built an AI event platform with conversational search across 5 live data sources. Built ML inference pipelines, distributed video processing, and billing infrastructure for an AI startup. I work fast across the full stack, from React/Next.js to AI agents with tool use and semantic search.

## Skills

- **AI:** Claude API | OpenAI API | Gemini API | Vercel AI SDK | pgvector | RAG | Embeddings | Tool Use
- **Product:** Strategy | User Research | Prototyping | MVP Development
- **Frontend:** React | TypeScript | Next.js | TanStack (Query/Router/Start) | Zustand | Tailwind
- **Backend/Infra:** Node.js | PostgreSQL | Prisma | Supabase | Trigger.dev | Docker | Serverless GPU

## Work Experience

Full-stack Software Engineer	Freelance	Sep 2024 – Current
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### AI Image & Video Generation Platform for E-commerce

- Built end-to-end ML inference pipeline: Dockerized diffusion model, deployed to serverless GPU, integrated with Next.js application.
- Built the AI text-editing pipeline end-to-end: Vision OCR for text detection, inpainting for removal, and font matching for seamless replacement in product photos.
- Architected a distributed video processing pipeline using pg-boss and Node.js, implementing idempotent retry logic and rate limiting to manage concurrent workloads across 10+ external AI providers (OpenAI, Runway, Kling).
- Engineered a custom two-pool credit billing system with Stripe integration; implemented idempotent webhook processing and atomic database operations to ensure financial accuracy during concurrent usage.
- Modernized frontend architecture by migrating to TanStack Query and Zustand, enabling optimistic UI updates for real-time tracking of long-running video generation jobs.

### Social Events Platform

- Led the migration to a TypeScript Monorepo, implementing shared Zod schemas to enforce type safety across the stack; this significantly reduced integration bugs and improved developer velocity for the junior team.
- Established strict CI/CD and Code Quality standards, migrating the API layer to typed services and eliminating technical debt to prepare the platform for public scale.
- Led team of 3 as Fractional CTO, mentoring 2 junior developers while modernizing architecture.

Senior Front End Engineer	Nearsure	Feb 2023 – Feb 2024
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- Improved efficiency and user satisfaction for 3,000+ sports organizers by engineering an interactive, user-friendly scheduling tool.
- Enhanced mobile experience by developing an optimized list view that enabled rapid event editing on mobile devices.

Front End Engineer	LeagueApps	Nov 2021 – Feb 2023
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- Reduced scheduling time by 45% and enhanced UX by implementing an intuitive drag-and-drop scheduling grid.
- Built comprehensive reporting modules with AG Grid, focusing on clear data presentation for event planning and analysis.
- Eliminated team double-booking issues by engineering an automated conflict detection system with clear user notifications.
- Established a standardized front-end component library using Styled Components and Storybook, ensuring consistent user experience across the application.

## Software Developer

Capgemini

Jan 2019 – Oct 2021

- Boosted development productivity by reducing test suite execution time by 60% (~20 min/cycle).
- Designed and implemented executive KPI dashboards, focusing on clear data visualization for leadership decision-making.

## Featured Projects

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- **BA Eventos** - AI event discovery for Buenos Aires with 3,200+ events from 5 scraped sources (Passline, Eventbrite, Meetup, Luma, BA Tourism). Users find events through conversation—search, save, share, get directions—all via a Claude agent with 17 tools achieving full UI parity. Built semantic search with OpenAI embeddings + pgvector, bilingual enrichment pipeline, and Trigger.dev background jobs for automated scraping.
- **Vox Prismatic** - Designed and deployed a full-stack AI SaaS MVP that processes client call transcripts then generates and schedules LinkedIn posts, streamlining coaches' and consultants' content workflows.

## Education

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- **B.S. in Health Sciences**, University of South Florida