Tomás Restrepo Vélez

Product & Design Engineer · AI-native systems

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I design digital experiences and build the software they need to work, from research and prototypes to apps in production. I started in experience design at Bancolombia, where I built Atalaya, the design team's research and prototyping platform. Today I build products by directing AI coding agents (Claude Code): a voice dictation app with 1,100+ registered users, a contract automation platform in weekly use by a US law practice, an automated video editing system, and internal AI tools for e-commerce brands.

Selected projects

GolemType · Product Engineer

Voice dictation app for Windows and macOS · March 2026 – Present · golemtype.com

Built with: Electron, Node.js, N-API addons, Cloudflare Workers, D1, R2, Groq Whisper, GitHub Actions, Sentry

- Designed, built and launched a push-to-talk dictation app that types formatted text into any application; distributed on the Microsoft Store and as a notarized macOS app. **1,100+ registered users**, ~150 weekly actives, paying subscribers at **one fifth** of the market leader's price.
- Architected a serverless backend on Cloudflare Workers and D1: JWT auth, per-user rate limiting and weekly quotas, and a proxy that keeps provider keys off the client. Speech-to-text (Whisper large-v3-turbo on Groq) plus LLM formatting at a **1.9 s median** from key release to text and ~$0.0003 per dictation.
- Led the migration from Supabase to Cloudflare after a launch spike (158 sign-ups in a day) exhausted the database and an exploit granted unlimited quota: patched the exploit the same day, then moved auth and data with shadow and mirror phases so no user had to sign in again.
- Reliability: 3,500+ automated tests, error tracking, a 10-minute canary with a dead-man switch and encrypted daily database backups.

Legal-tech platform for a US-based law practice · Product Engineer

Contract automation web app · 2026 · Remote

Built with: Next.js, TypeScript, Supabase (Postgres, RLS), Gemini 2.5 Pro vision, Claude, Document AI, Dropbox API

- Built a contract-intake app in weekly use since June 2026. It reads scanned real-estate purchase contracts, asks a person to confirm the critical fields, then creates the client's Dropbox folder with 7 subfolders and 6 pre-filled legal documents and feeds a shared key-dates calendar. Per-client paperwork went from **~30 minutes** of manual reading and drafting **to about a minute**.
- Built a Closing Disclosure generator (federal CFPB H-25 form): two independent AI readers plus OCR, flagged when they disagree, and a deterministic calculation engine that blocks export if the numbers do not reconcile. Matches the official CFPB sample to the cent; tested against 48 real disclosures. ~3,900 automated tests and CI.

Speech and computer-vision pipeline for automated editing

ML system built for Rubicon Performance, in production with 2 of its clients · 2026

Built with: Python, faster-whisper, wav2vec2 CTC, OpenCV, Robust Video Matting, FFmpeg, HyperFrames, GSAP, Claude Code

- Built a pipeline that turns raw on-camera takes into finished ads: word-level transcription, CTC forced alignment and 10 ms voice-energy analysis to cut on real silence, best-take selection, face tracking, matting, motion graphics rendered as a transparent HyperFrames layer, and broadcast loudness.
- Added a second, independent acoustic model to catch repeated phrases that speech recognition hides: 7 of 7 detected with 0 false alarms, turning an hour of human review into ~2 minutes.
- Runs as Claude Code agent skills on NVIDIA, Apple Silicon or CPU; automated checks for overlaps, faces and safe zones decide what passes.

Pilas · Price-history tracker for Colombian retail

Prototype · 2026

Built with: Python, GitHub Actions, Cloudflare Workers and D1, PWA

- Daily collector tracking **~51,000 products** across 6 retailers, so users can tell a real discount from an inflated one by its own price history. Noise filters cut false price and stock changes by 96% on measured samples.

Experience

Cattory SAS · Digital Team Lead

July 2025 – Present · Remote

- Lead a creative studio's digital team and build its software: the legal-tech platform above for a client, and the studio's operations platform for contracts, invoicing, Colombian VAT rules, serverless PDF generation, row-level security and admin and accountant roles (Next.js, Supabase).

Rubicon Performance · Creative Automation Lead

December 2025 – Present · Remote

- Lead a 4-person creative production team working with media buyers across several verticals, and built the automated editing pipeline above that is now part of its workflow.

HomeLife Media LLC · Creative Technology Lead

June 2024 – September 2026 · Remote

- Led creative production in a 6-person team for 5 cause-driven e-commerce brands, first on paid ads with media buyers and then on organic social.
- Built Stickman Studio, an internal web app that turns an idea into an illustrated explainer video for the company's supplement brands, with a person approving each step: Claude writes the script, fal.ai models draw and animate each scene, ElevenLabs voices it and FFmpeg assembles it (Node.js, Express).
- Automated the publishing workflow between Asana and Publer with idempotent sync, an account allowlist and an audit log.

Fab Lab, Colegio Mayor de Antioquia · Digital Interactive Experiences Designer

2022 – 2023 · Medellín

- Designed digital and in-person experiences at a university fabrication lab: user flows, interaction strategies and prototypes.
- Prototyped physical pieces with 3D printing, laser cutting and CNC routing.

Bancolombia · Experience Designer

July 2020 – April 2022 · Medellín

- Designed and built Atalaya, the team's research and prototyping platform (SharePoint, Power BI), with smart templates for journey maps, service blueprints, interview guides and emotion curves. Its research fed the design sprints behind the bank's new mortgage application experience.
- Worked on the bank's employee-experience platform, from research and journey mapping to mockups in Figma.

Earlier · Animation, VFX and content

2019 – 2024

- Video strategy and VFX for a large YouTube channel, 2D/3D animation for a healthcare company, augmented reality and projection mapping at universities, and branded content for consumer tech brands.

Skills

Product and design: Experience design, journey mapping, service blueprints, emotion curves, user research, design sprints, prototyping, Figma, design systems, motion design

Build: TypeScript, JavaScript, Node.js, React, Next.js, Electron, Python, SQL, HyperFrames, GSAP, Claude Code, Playwright, test-driven workflows

Cloud and data: Cloudflare Workers, D1, R2, Supabase (Postgres, RLS), Vercel, GitHub Actions, Sentry

AI and ML: Claude (Opus), Gemini, Whisper, Groq, ElevenLabs, fal.ai, LLM benchmarking, CTC forced alignment, face detection, video matting, FFmpeg

Languages: English (C1), Spanish (native)

Education

B.Eng. Digital Entertainment Design Engineering · Universidad Pontificia Bolivariana

2017 – 2021 · Human-centered design, interaction design, 3D animation, game development (C#, Unity)