

MARCUS ESCALONA

SENIOR PRODUCT ENGINEER · REACT, TYPESCRIPT & WEBGL

Mexico City, MX · Available full-time, remote (USD) · Native English & Spanish

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PROFESSIONAL SUMMARY

Senior product engineer with 6+ years across product, systems and infrastructure engineering. I own architecture end to end — from serverless React and TypeScript ecosystems to real-time data layers and immersive WebGL environments. Currently leading engineering for a platform suite serving 200+ daily users, where I define the technical direction, component architecture and delivery pipeline. Native English and Spanish speaker with a background in physics and audio engineering.

TECHNICAL SKILLS

Frontend & Core React · TypeScript · JavaScript (ES6+) · Zustand / Redux · Tailwind CSS · Vite · HTML5 · CSS3

Cloud & Backend Supabase (PostgreSQL, Auth, RLS) · Firebase (Serverless SPA, Firestore) · REST APIs · Python microservices · SQL · CI/CD

3D & Performance Three.js · WebGL · Canvas API · Custom physics · Procedural rendering · Render-loop & memory profiling

Tools & Workflow Git · GitHub · Netlify · Vercel · Cursor · AI-assisted development · Agile

PROFESSIONAL EXPERIENCE

Lead Product Engineer · Escuela Berta Von Glümer

Oct 2023 – Present

- Architected and shipped a suite of five React and TypeScript applications serving 200+ students and staff, defining the frontend architecture, shared component system and deployment pipeline end to end.
- Led delivery of EBVG-Hoot, a real-time multiplayer assessment platform, designing an event-driven data layer on Firestore onSnapshot to keep game state synchronised across concurrent players.
- Owned the 3D engineering track: three interactive learning environments in Three.js and WebGL — a solar system explorer, a colour-mixing art studio and a parkour game with custom collision physics — profiling the render loop and memory use to hold a stable frame rate on constrained school hardware.
- Established CIT-Sync, an internal platform for spatial management, hardware inventory and software requests, replacing manual spreadsheet workflows across departments.

Systems Engineer · Getting Out

2022 – 2023

- Built Python automation services, REST APIs and microservices that streamlined internal data processing workflows.
- Designed SQL data models and service-oriented architecture to support operational reporting.

Audio Engineer (Remote) · Black Fox Productions

2019 – 2025

- Delivered broadcast-ready audio post-production for international cinema chains, running asynchronous review cycles and signal routing across Pro Tools, Ableton Live, iZotope RX and Dante.

EARLIER EXPERIENCE

IT Systems Engineer · Cedros College

2021 – 2022

Network security and infrastructure administration across the corporate network — Active Directory, Fortinet, Windows Server, Group Policy.

Systems Engineer · CONACULTA / Secretaría de Cultura

2016 – 2017

Technical architecture support, QA testing and debugging of custom government software — Linux, SQL, Bash.

SELECTED PROJECTS

NIMIO Levels · github.com/MarcusPicazo

Gamified team progression platform with code-based authentication, role-scoped access and an audited action history. React, TypeScript and Supabase (PostgreSQL) — access codes stored hashed rather than in plaintext, with row-level security enforcing per-member scope.

Taylor · **Safe mobility for women (co-founder)** · apptaylor.com

Core architecture for pilot programmes in Mexico City, California and London, integrating geolocation logic and real-time push notifications.

EBVG-Hoot · github.com/MarcusPicazo/ebvg-hoot

Real-time multiplayer quiz platform for classroom use. React and Firestore, structured with custom hooks separating game logic from presentation.

EDUCATION

Completed B.Eng. Computer Systems, Universidad Europea de Madrid · B.Sc. Music & Innovation, Universidad Panamericana

In progress B.Sc. Physics, Universidad Autónoma Metropolitana (final year) · M.Sc. Astrophysics

CERTIFICATIONS & LANGUAGES

Certifications IBM Full Stack Developer · IBM Machine Learning & Python · Google Digital Marketing · EF SET C2 English

Languages English (native) · Spanish (native) · Italian (B2) · Catalan (B2)