

ALBERTO GUINDA SEVILLA

Full-Stack Developer | Digital Twins | IoT | AI / Computer Vision
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PROFESSIONAL SUMMARY

Full-Stack Developer with 2+ years of experience building digital twin platforms, IoT systems with computer vision, and AI-powered applications. Specialized in 3D visualization (Three.js, CesiumJS), industrial sensing (MQTT, ESP32), and computer vision (YOLOv8, CLIP). Proven track record of delivering complete products end-to-end—from architecture to production—autonomously and under tight deadlines. Strong background in automation, CI/CD pipelines, Docker, Linux-based deployments, and monitoring of distributed high-availability systems.

PROFESSIONAL EXPERIENCE

Full-Stack Developer / Digital Twin Engineer — OFITECO — Groupe VINCI (Feb 2026 – Present)

Zaragoza, Spain | Critical infrastructure monitoring & ADIF railway surveillance

- **xdata-bim:** Built a complete Digital Twin platform from scratch. BIM web viewer (Svelte 5, Three.js, @thatopen), 8 IoT sensor types streamed in real-time (WebSocket), analytical dashboards (Z-score, Bollinger, Pearson, rate-of-change), IDW heatmaps, BCF 2.1 round-trip. 31 components, 202 tests, 782 i18n keys, full CI/CD pipeline.
- **BIM↔Terrain alignment engine:** CesiumJS + Google 3D Tiles, N-point GPS registration with Helmert/Procrustes (SVD), ENU→ECEF per-frame sync, 10 base layers (IGN PNOA, WMS/WMTS). Competes with Bentley iTwin (\$499+/mo).
- **xdata-camera-service:** Railway surveillance with CPU-based computer vision. YOLOv8n (ONNX) + CLIP zero-shot + SSIM pipeline: ~700ms/frame, 50 autonomous solar-powered 4G cameras. Multi-level alerting, exclusion zones (ray-casting), GPS cross-trigger with OTT ecoLog 1000 hydrological sensor. Python/FastAPI, Svelte 5, Docker, MQTT, 128 tests.
- **Infrastructure & DevOps:** Docker containerized deployments on Linux servers, GitHub Actions CI/CD with automated testing, monitoring dashboards with real-time anomaly detection, MQTT broker management for 50+ IoT endpoints.

Full-Stack Developer / IoT Engineer — Instituto Tecnológico de Aragón (ITA) (Oct 2024 – Jun 2025)

Zaragoza, Spain | R&D in smart agriculture and industrial digital twins

- Agricultural IoT system with computer vision (EfficientNet-B0), web dashboard (React, Node.js, InfluxDB, MQTT, CoAP). End-to-end sensor-to-dashboard pipeline on Linux.
- Industrial digital twin with Blender + Babylon.js; sensor integration in VR (Oculus) environment.
- Interactive BIM viewer (Three.js, TypeScript) with IFC loading and sensor simulation. Recommendation letter on file.

Systems Analyst — UB Manufacturing S.L. (Sep 2025 – Nov 2025)

Zaragoza, Spain | Industrial technology infrastructure modernization

- CV Finder: semantic candidate search with local AI (Next.js 15, Transformers.js, vector embeddings). On-premise deployment.
- 200+ incidents/month resolved. Automation and system modernization proposals for legacy infrastructure.

Web Developer — Agencia Digital SP (Apr 2024 – Jun 2024)

- WordPress child themes + GPT-3.5 chatbot integration via OpenAI API.

Junior Web Developer — Pikolín (Apr 2023 – Sep 2023)

- Sales forecasting with SARIMAX model; 40% reduction in query time. Recommendation letter from CIO.

Frontend Instructor — INAEM (Public Employment Service) (2023)

- In-person HTML course for unemployed professionals in Zaragoza.

TECHNICAL SKILLS

Frontend / 3D: React, Svelte 5, TypeScript, Next.js, Three.js, CesiumJS, Babylon.js, ECharts, Tailwind CSS, Vite, React Native

Backend: Node.js, Express, Python (FastAPI, Django), Go, WebSocket, JWT, REST APIs

AI / ML / CV: YOLOv8 (ONNX), CLIP, Transformers.js, vector embeddings, OpenAI API, Anthropic API, MCP

IoT: MQTT, CoAP, ESP32, InfluxDB, industrial sensing, 4G/LTE protocols, Neolink P2P

BIM / GIS: IFC (web-ifc WASM), @thatopen, BCF 2.1, CesiumJS, Google 3D Tiles, Helmert SVD, WMS/WMTS

DevOps / QA: Docker, GitHub Actions, CI/CD, Playwright, Vitest, Jest, pytest, Lighthouse CI, Sentry, Linux (Ubuntu), Bash scripting

Databases: PostgreSQL, Supabase, MongoDB, InfluxDB, ChromaDB, SQLite, MMKV

Monitoring: Real-time anomaly detection (Z-score, Bollinger), InfluxDB dashboards, MQTT-based distributed telemetry, Sentry error tracking

KEY PERSONAL PROJECTS

DevFlow AI (Master's Thesis) — devflowai.dev (2026)

- 20 developer tools with integrated AI (4 providers). Next.js 16, React 19, TypeScript strict. 1,780 tests, Lighthouse 100/100/100/100, WCAG AAA, PWA, 8 languages, CI/CD with 9 pipelines (CodeQL, Semgrep, SBOM). Open source.

Cherry TV — Premium IPTV Android App (2026)

- React Native 0.76, TypeScript, Clean Architecture. On-device ML engine with 10 recommendation factors, fuzzy search <50ms (trigrams + Levenshtein), 7 native Kotlin modules. 1,197 tests, 79 locales, WCAG AAA.

TACTIX — Google Play Closed Testing (2025–2026)

- Strategic mobile game (React Native 0.83 + Expo SDK 55). Minimax alpha-beta AI, real-time multiplayer (Supabase Broadcast), ELO ranked, full monetization (IAP + AdMob), 240 tests, 30 languages.

RecruitSecure AI — recruitsecureai.com (2025)

- B2B SaaS: semantic CV search with vector embeddings (pgvector). Multi-tenant, AES-256, SSO/SAML. 990+ tests. Next.js, Supabase.

Cherry Core ERP v3 — Enterprise ERP (2025–2026)

- 20 modules, 90 Prisma models, 1,658 tests, multi-tenant, 6 ML services, Stripe, 2FA, Verifactu. Next.js 16, PostgreSQL.

EDUCATION

Master's in AI-Driven Development — BIG School (Universidad Isabel I) (2025–2026)

Official university degree pending issuance. Thesis: DevFlow AI.

Master's in Digital Transformation & IoT — ITA (2024–2025)

600h. Grade: 8.8/10. Thesis: PlantsCare (IoT + Agricultural AI).

Frontend Development Course (300h) — INAEM (2025)

Certificate pending issuance.

Higher Diploma in Web Application Development (DAW) — Academia Marco (2022–2024)

2,000h. Equivalent to EQF Level 5.

Intermediate Diploma in IT Systems & Networking (SMR) — Izquierdo FP (2020–2022)

2,000h.

CERTIFICATIONS

Anthropic Academy (12): Claude Code in Action, Claude 101, MCP Intro + Advanced, Agent Skills, Subagents, Claude Cowork, AI Fluency (Framework, Students, Educators, NGOs, 4D Teaching).

Google Cloud: Get Certified Program (in progress, Apr 2026). AI Essentials.

KEY METRICS

2 complete platforms in 6 weeks (solo) | 7,000+ accumulated tests | Lighthouse 100/100/100/100 | 1 product in production | 4th place Hackathon The Wave 2025 | 2 verifiable recommendation letters

METHODOLOGIES

Clean Architecture, SOLID, DRY, TDD, CI/CD, Agile/Scrum, Git Flow, WCAG AAA, i18n, Technical Documentation, Advanced Prompt Engineering, AI Pair Programming (Claude Code, MCP).

LANGUAGES

Spanish (native) | English (B1 — fluent technical reading and documentation)

ADDITIONAL INFORMATION

- Verifiable recommendation letters: Instituto Tecnológico de Aragón (ITA) and Pikolín (Grupo Flex).
- Portfolio: albertoguindaportfolio.vercel.app
- EU citizen (Spain). Driving license (Class B). Availability: Zaragoza, Madrid, Barcelona, remote.
- Willing to relocate within the EU.