



Santiago Blanco Vilchez

Head of AI Engineering · Solutions Architecture & Distributed Systems

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English B2 · Spanish native

15 years building software and systems

0.60 → 0.95 Apdex on a client platform, as a team

~30,000 users on that platform

PROFILE

Systems Engineer and Big Data & Business Intelligence specialist with 15 years building enterprise software, distributed backends, cloud infrastructure and data platforms. Currently Head of AI Engineering at Soluntech, combining hands-on engineering, AI systems architecture, technical discovery and product innovation across healthcare, analytics and enterprise systems.

EXPERIENCE

Jul 2022 - Present

Medellín, Colombia

Head of AI Engineering · Soluntech

DevOps → Product Innovation → AI Engineering Leadership

- Lead solution architecture for Clara Care, a team-built healthcare platform: cloud integration patterns, data flows, service boundaries and security.
- Built Clara Care's product surfaces: an EMR-embedded widget that fills the clinic's own forms, a Chrome extension (Manifest V3), the clinician platform and a SwiftUI iOS prototype, with live state synced over S2 streams.
- Built Clara Care's real-time speaker identification service: Silero VAD, ECAPA-TDNN embeddings (SpeechBrain, PyTorch) and online clustering, with encrypted voiceprints that never reach logs.
- Responsible for building a HIPAA-compliant platform; worked on the implementation of ISO 27001 for information security management.
- Implemented SQS-based asynchronous processing for a client platform serving about 30,000 users; contributed to raising its Apdex from 0.60 to 0.95.
- Built cloud analytics and ETL workflows with BigQuery, dbt, Cloud Functions and Looker Studio; contribute to technical discovery and solution planning.
- Earlier DevOps work: resilient deployments, GitHub Actions automation, AWS autoscaling and load balancing, Kubernetes and production observability.

Jan 2022 - Jun 2022

Bogotá, Colombia

Manager of Research Solutions · Iota Impact

- Developed customer traffic analysis tools and market intelligence dashboards for metaverse platforms, with research and development teams.

TECHNICAL STRENGTHS

Backend & systems

Node.js · TypeScript · Python · Express · NestJS · REST APIs · Queues · Event-driven architecture · Retries, DLQs, idempotency

Product surfaces

React · SwiftUI (iOS) · Chrome extensions (MV3) · Embeddable widgets (Shadow DOM)

Cloud & operations

AWS: SQS, SNS, Lambda, S3, RDS, EventBridge, EKS · GCP: BigQuery, Cloud Functions, Pub/Sub · Kubernetes · Docker · Helm · GitHub Actions

Data & AI

PostgreSQL · SQL Server · Redis · BigQuery · Redshift · Glue · dbt · DuckDB · Rill · Looker Studio · LLM integrations · Agent orchestration

Machine learning

PyTorch · SpeechBrain · scikit-learn · Hugging Face Transformers · Whisper · Speaker embeddings & clustering · Voice activity detection

Security & compliance

HIPAA-compliant platforms · ISO 27001 implementation · Least privilege · Short-lived credentials

Testing & quality

Playwright (E2E) · pytest · Unit & integration testing · CI quality gates

Observability

New Relic · Sentry · Production troubleshooting · Infrastructure scaling

Jul 2021 - Dec 2021
Madrid, Spain

DevOps Instructor · Pronoide

- Designed and delivered hands-on Docker, Kubernetes and AWS training for public- and private-sector organizations.

Mar 2015 - Jun 2017
Medellín, Colombia

Software Developer · Mantum S.A.S.

- Built full-stack enterprise applications for document management, scanned-document ingestion, Elasticsearch search, invoicing and workflow automation.
- Developed business intelligence and geolocation applications with PostgreSQL, SQL Server, Angular, Vue and Zend Framework.

EARLIER ENGINEERING

2017 - 2021

Selected engagements

GIS applications for the National Hydrocarbons Agency; energy-demand forecasting interfaces for Universidad de Antioquia/XM; mobility analytics with Universidad de San Buenaventura; electrical planning software with Universidad de los Andes (MAEP), including Python/ML integrations and queue-backed processing with Redis. React Native features, functional testing and Go-based integrations for Melt Studio.

2011 - 2015

Universidad de Antioquia

Systems for Antioquia’s Departmental Water and Sanitation Plan (PDA): resource allocation tracking, program monitoring and management indicators; also education GIS and energy cost models.

SELECTED PROJECTS

Clara Care · Healthcare AI platform

Solution architecture and hands-on engineering: EMR widget, Chrome extension, clinician platform, iOS prototype, speaker identification and AI integrations on AWS.

Case study ↗

Incredible Me · Generative AI product, in production

Personalized children’s books with Gemini image models: character references, page generation, mask fallbacks with OpenCV, automatic QA and retry, and print-ready PDFs.

Case study ↗

Agent Private Credit · Financial analytics AI proof of concept

Tenant-oriented agent and analytics components with Kubernetes/K3s, Helm, Node.js, React, Rill and DuckDB.

Case study ↗

Uptime Buster · Medical billing audit, pilot

Semantic claim audit with Gemini (CPT against ICD-10), K-Means clusters in a 3D lab, a Hono/Supabase ingestion API and an MCP server for agents.

Case study ↗

ForgeAI · Agent engineering platform

AI-agent orchestration with isolated execution, work coordination, audit evidence, GitHub integration and Kubernetes deployment.

Case study ↗

EDUCATION

Specialization in Big Data & Business Intelligence

Universidad Católica Luis Amigó, Medellín · 2019

Systems Engineering

Universidad Católica Luis Amigó, Medellín

Technologist in Information Systems Analysis & Development

SENA, Medellín · 2010 – 2013

CREDENTIALS

Distinction

Outstanding Systems Engineer · Universidad Católica Luis Amigó · 2019

English B2

EF SET certificate ↗

Open source

VuelInstant, autocomplete for Vue ↗

Coursework

dbt · New Relic Observability · High-Concurrency Architecture · Data Warehousing (2023)