

ALEJANDRO MARCHÁN

Senior AI Engineer

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SUMMARY

Senior AI Engineer with 7+ years of experience building and shipping large-scale data and AI systems end to end. Now focused on production-grade AI: autonomous agents, Retrieval-Augmented Generation (RAG) pipelines and LLM-powered tools that handle real data, real users and real pressure. Backed by a strong foundation in data engineering, NLP and machine learning at scale (300K+ calls/month, 1.5MM+ products, multi-cloud deployments). I turn ambitious AI ideas into deployed MVPs in weeks, not months.

WORK EXPERIENCE

Naktor

Mar 2026 - Present

Senior AI Engineer - Madrid, Spain

- Build production-grade AI systems end to end: autonomous agents, RAG pipelines and LLM-powered tools, taking products from idea to deployed MVP in 2 to 4 weeks.
- Design and ship Retrieval-Augmented Generation pipelines over real customer data, focused on reliability and faithfulness.
- Orchestrate multi-step autonomous agents serving real users and workloads, with the observability and guardrails needed to run safely in production.
- Own the full lifecycle from prototyping to deployment and monitoring.

Skills: Python, LLMs, RAG, Autonomous Agents, Docker, GCP

Verisure

Sep 2024 - Mar 2026

Data Engineer - Madrid, Spain

- Built speech analytics pipelines processing 300K+ customer calls per month, applying real-time NLP to turn raw conversations into actionable insight.
- Productionized machine learning models on cloud infrastructure (AWS, GCP, Azure): deployment, scaling and monitoring.
- Designed real-time NLP data pipelines for transcription and analysis, improving the quality and availability of conversational data.

Skills: Python, NLP, Speech Analytics, AWS, GCP, Azure, MLOps

Stratio BD - Generative AI Data Fabric for enterprises

Jun 2021 - Sep 2024

Big Data Engineer - Madrid, Spain

Project with International Banking Client (11/2023 - 09/2024)

- Reduced identification time by 98% by implementing an automated identification process for over 50,000 tables with sensitive data.
- Worked hand in hand with the client to mask the sensitive data found using ETL processes developed with Spark, enhancing data security and compliance.

Skills: Python, Spark, Scala, SQL, Client Communication, Metabase

Stratio product development (10/2022 - 11/2023)

- Collaboratively developed a high-performance pattern detection system using Spark with Scala, achieving a response time of 0.1ms per datum and a custom DSL for pattern definitions.
- Followed trunk-based development to promote new features through continuous integration, developing robust tests for each new feature.

Skills: Spark, Scala, SQL, Git, CI/CD, Testing

Project with International Retail Client (06/2021 - 10/2022)

- Participated in the implementation of a typeahead system, harnessing NLP models to extract semantic information from 1.5MM+ products. Achieved a 15% increase in search auto-completion usage and boosted sales conversion by 7%.

- Played a pivotal role in pioneering a relevance ranking system, processing ~8GB daily user analytics, resulting in a 60% uplift in global KPIs. Innovated with a genetic algorithm optimizing Elasticsearch parameters.

Skills: *ETLs, Python, Spark, SQL, Natural Language Processing, Elasticsearch*

Other achievements

- Created a visualization enhancement for ETL processes through a Dash app with Plotly, which was subsequently integrated into Stratio's core product and used by 10+ teams.
- Taught a Spark course to 10 newcomers in Stratio's NUMA program.

Skills: *Python, Spark, SQL, Communication, Data Visualization*

Dominion Global - Digital Solution for Hospital Food Management
Madrid, Spain

Sep 2018 - May 2021

Data Engineer (06/2019 - 05/2021)

- Developed robust ETL processes using PySpark, managing data from 300K daily meals served across 165+ global hospitals.
- Implemented a time series ML model to forecast weekly meal demand, achieving a 15% cost reduction in meal preparation and minimizing food waste.

Skills: *ETL, Python, PySpark, SQL*

Full Stack Engineer (09/2018 - 06/2019)

- Contributed to software development using Angular and Java with Spring Boot, enhancing product capabilities.
- Improved label creation, reducing processing time by 95% through the integration of a live PDF editing tool.
- Optimized search functionality, leading to a 35% time reduction by adding a Redis cache.

Skills: *SQL, TypeScript, Angular, Java*

CERTIFICATIONS

Advanced SQL · Stratio Data Centric Engineer · Certificate in Advanced English (CAE) · Data Centric Basics
· Python

EDUCATION

Bachelor in Computer Science and Engineering
Universidad Carlos III de Madrid - Madrid, Spain

09/2016 - 09/2020

PROJECTS

amarchan.com - 9+ live systems. Selected highlights:

- **Cámaras DGT** - Real-time interactive map of Spain's DGT traffic cameras; enter a route and see it through live camera footage. (*Next.js, React, MapLibre GL, Zustand*)
- **WhatsApp Wrapped** - NLP analysis of WhatsApp chats surfacing conversation stats and patterns. (*Next.js, NLP, PartyKit*)
- **La Liga Stats** - Scraped, cleaned and served interactive football statistics for data-driven debates. (*Next.js, Python, Playwright*)
- **Aforo Sputnik** - Real-time occupancy tracker scraping 6 climbing-gym locations every 5 minutes. (*FastAPI, Chart.js, SQLite*)
- **BarkTracker** - ML-powered bark detection system (bachelor thesis) with real-time detection at ~96% accuracy using CNNs. (*Python, TensorFlow, DSP*)

LANGUAGES

English - Full Professional Proficiency

Spanish - Native Proficiency