

Nicolás Barceló Lozano

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Senior Data Scientist & Software Engineer with 25+ years of experience designing and implementing high-impact solutions across enterprise systems, document management, and process automation.

*Currently focused on **AI Agents**, **LLM orchestration**, and **intelligent automation**, combining a strong foundation in **.NET development** with expertise in **Python**, **NLP**, and **Generative AI**.*

Passionate about rapidly prototyping, testing, and scaling AI systems that enhance decision-making, optimize workflows, and deliver measurable business impact.

PROFESSIONAL EXPERIENCE

Tecnomedia Sistemas

Data and Documentation Technology Specialist

Barcelona, Spain

Nov 2002–Present

- **AI Agents & Generative AI**

- Built and deployed AI agents for **decision automation** and enterprise system integration using **LangChain**, **LangGraph**, **CrewAI**, **n8n**, and **Azure AI**.
- Integrated **generative AI models** through the **OpenAI SDK**, enabling rapid prototyping and reliable LLM-based automation.
- Designed **multi-agent orchestration pipelines** for real-world use cases (document workflows, healthcare scheduling, CRM integrations).

- **Document & Data Solutions**

- Led development of **document management applications** in .NET (C# / WPF / WinForms) and SQL Server.
- Designed workflows for **digitization**, **indexing**, **OCR/ICR**, and **barcode recognition** in industrial and healthcare domains.

- **AI/ML Projects**

- Developed **content-based text classification** (NLP) for knowledge management.
- Directed a **quality prediction project** in the chemical industry using ML models.

- **Integration & Automation**

- Implemented **RPA solutions** with C#, Python, and low-code (n8n).
- Built REST APIs and integrated enterprise systems with **Minimal API** and **FastAPI**.

NexTReT

Programmer - Analyst Programmer

Barcelona, Spain

Dec 2000 - Nov 2002

- Developed enterprise applications in **VB6**, **SQL Server**, **ASP (VBScript)** for insurance and consultancy clients.
- Built HR and payroll management solutions with **PowerBuilder**.

Datasix Sistemas

Consultant

Barcelona, Spain

Oct 1999 - Dec 2000

- Designed and implemented **Business Intelligence solutions** (VBA, SQL Server, multidimensional analysis).
- Developed **Data Warehouses and Data Marts** and trained users in BI tools.

EDUCATION

UNIVERSITAT DE BARCELONA
Bachelor's Degree in Physics

Barcelona, Spain
Jun 1999

IEBS Business School
Master's in AI, data science & ML and Big Data

Barcelona, Spain
Nov 2022 - Sept 2023

CERTIFICATIONS

- Tensorflow developer certificate (2024)
- AZ-900 Azure Fundamentals
- AI-900 Azure AI Fundamentals
- PCEP-30-02 – Certified Entry-Level Python Programmer
- PCEP-31-03 – Certified Associate in Python

SKILLS

- **AI & ML:** LLMs, Prompt Engineering, AI Agents, LangChain, LangGraph, CrewAI, OpenAI SDK, NLP, RAG pipelines, Scikit-learn, TensorFlow, Streamlit, YOLO
- **Software Development:** .NET (C#, VB.NET, WinForms, WPF), Python, JavaScript/TypeScript
- **Data & Cloud:** SQL Server, NoSQL, Azure (Functions, AI, Synapse, Data Factory), Docker
- **Automation:** RPA frameworks, n8n, API development (REST, OpenAPI)
- **BI & Visualization:** Power BI, process mapping, human-in-the-loop systems
- **Languages:** Native Spanish & Catalan; Professional English

