

Fernando Velasco Lozano

Senior Applied Data Scientist & AI Tech Lead

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Professional Summary

Visionary Data Science Leader with over a decade of experience driving transformative AI solutions as a technical lead and manager. Proven expertise in managing end-to-end ML lifecycles, leading high-performing teams, and delivering measurable business impact through advanced AI technologies (LLMs, Computer Vision, ASR, NLP, neuro-symbolic architectures). Skilled in strategic project design, cross-functional collaboration, and mentoring teams to achieve technical and operational excellence. Seeking a senior leadership role (Lead Data Scientist/ML Engineer) to shape innovative AI strategies and drive organizational success.

Core Competencies

- **Leadership & Management:** Team leadership, project ownership, technical strategy, stakeholder engagement, and mentorship.
- **AI/ML Expertise:** Large Language Models (LLMs), Natural Language Processing (NLP), Computer Vision, Automatic Speech Recognition (ASR), Multi-modal ML, Deep Learning, Neuro-symbolic AI
- **Technical Stack:** Python (Expert), PyTorch, HuggingFace, TensorFlow, SQL, R, Scala, MLFlow, AWS, Azure, Git, Docker.
- **MLOps & Deployment:** End-to-end ML lifecycle management, model fine-tuning, deployment, and monitoring.
- **Business Impact:** Delivered cost reductions (up to 75%), efficiency gains (15,000+ hours saved), and quality improvements (e.g., 15% MT quality increase, WER reduced to <0.5%).

Professional Experience

NielsenIQ | Senior AI Researcher & Tech Lead | *Sept 2025 – Present*

- Lead a specialized AI squad, managing technical delivery and task allocation while mentoring junior engineers in RAG and embedding-based architectures.
- Architected a hybrid Neuro-symbolic AI system that integrates Symbolic AI (knowledge bases/rules) with Neural AI (LLMs) to generate traceable insights from tabular data.
- Designed an optimized legal clause extraction engine using a multi-stage pipeline (Bag-of-Words + Embeddings + LLM) to maximize precision while minimizing token costs.
- Strategic Technical Lead: Collaborate with TPOs and stakeholders to define AI roadmaps and present technical solutions directly to clients.
- Full-stack AI Engineering on Azure, implementing advanced prompt engineering and vector-based retrieval systems.

Stealth-Mode AI Startup | Senior Data Scientist | *Mar 2025 – Sept 2025*

- Designed hyper-personalization pipelines using up to 3 RAG systems with indexed embeddings.
- Developed LLM-as-judge frameworks to evaluate model coherence and knowledge depth via custom metrics.
- Built backend systems for LLM agent orchestration for collaborative decision-making.

Electronic Arts | Data Science Team Lead | *Jan 2020 – Mar 2025, Madrid, Spain*

- Spearheaded a high-impact Data Science team, overseeing the full ML lifecycle (research, development, deployment, monitoring) for global localization projects.
- Mentored and managed a team of data scientists and machine learning engineers, fostering technical excellence and collaboration across departments.
- **Key Achievements:**
 - **Reduced ASR Word Error Rate (WER) from 10% to <0.5%** using Wav2Vec and Whisper.
 - **Fine-tuned 7B LLMs** for translation, improving quality by 15% and **reducing costs by 75%**.
 - Led the end-to-end ML lifecycle for localization and personalization in agile environments.
 - Awarded Bronze at the 2022 Spanish NLP Hackathon for a gender-neutral text generation model.
 - **Enhanced ASR Systems:** Reduced Word Error Rate from 10% to <0.5% by training domain-specific ASR models (Wav2Vec, Whisper), leading experimentation and deployment.
 - **Automated Video Quality Verification:** Developed a multi-modal OCR and object detection system, saving 15,000 manual work hours annually. Served as Tech Lead and primary developer.
 - **Multi-modal Content Indexing:** Built a fast image indexer using fine-tuned CLIP models for semantic content search, leading end-to-end development.

Afi Escuela de Finanzas | Guest Lecturer | Feb 2020 – Present, Madrid, Spain

- Delivered advanced lectures for the Master in Artificial Intelligence program, focusing on Deep Learning and Computer Vision applications (Vision Transformers, CLIP, Object Detection, VAEs, Stable Diffusion).
- Designed and taught a comprehensive curriculum, mentoring students on practical AI implementation and fostering critical thinking.

Dive.tv | Senior Data Scientist | Mar 2019 – Jan 2020, Madrid, Spain

- Led Computer Vision initiatives, managing end-to-end ML projects focused on recognition, tracking, and pose estimation. Managed team workflows and client relationships, ensuring alignment with business objectives.
- Directed a multi-camera tracking system using Facenet, FasterRCNN, and DeepSORT, integrating emotion recognition via CNNs and pose-based models.
- **Key Achievement:** Delivered a scalable tracking system across multiple locations, enhancing operational capabilities.

StratioDB | Data Scientist | Jul 2015 – Mar 2019, Madrid, Spain

- Developed ML models (Classic ML, CV, NLP) for large-scale datasets, supporting clients in retail, energy, and telecommunications.
- Led projects in recommender systems, Time Series analysis, and Customer Journey mapping, driving actionable insights and business value.

Indra | ATM Software and Aeronautic Model Developer | Jan 2011 – Jul 2015

- Designed software for Air Traffic Management systems and developed aeronautic models, honing skills in complex system design and software engineering.

Universidad de Salamanca | Researcher | Jun 2006 – Jan 2011, Salamanca, Spain

- Conducted Ph.D.-level research in Algebraic Geometry, developing advanced analytical and problem-solving skills.

Education

- **Master's Degree in Data Science** | U-TaD, Madrid, Spain (2014–2015)
- **Master's Degree in Advanced Mathematical Methods in Physics** | Universidad de Salamanca, Spain (2008–2009)
- **Bachelor of Science in Mathematics (Major in Algebraic Geometry)** | Universidad de Salamanca, Spain (2000–2005)