Fernando Velasco Lozano

AI Scientist

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EXPERIENCE

Electronic Arts | Data Science Team Lead (Jan 2020 – Present)

- Managed the full Machine Learning model lifecycle (research, training, development, deployment, monitoring).
- Specialized primarily in Computer Vision, NLP & LLMs, with deep expertise in ASR, and MLOps.
- Provided technical leadership and management for EA Localization's Data Science team and projects.
- **Key Projects:**
  - **Optimized Machine Translation with LLMs:**
    - **Increased MT quality by 15%** and **reduced costs by 75%** by leveraging and fine-tuning Large Language Models (LLMs) (up to 7B) at domain, instruction, and alignment levels.
    - Served as Tech Lead for the project and contributed as a developer, primarily on the fine-tuning phase.
  - **Cognitive Architecture for LLM Operations:**
    - Led the technical design (architecture, tech selection) and evaluation of a system using foundational LLMs (GPT-3.5/4) for file operations, including information retrieval and Q&A.
  - **Enhanced Automatic Speech Recognition (ASR):**
    - **Reduced Word Error Rate (WER) from 10% to below 0.5%** by training ASR architectures (Wav2Vec, Whisper) on domain-specific data.
    - Led the experimentation, training, and deployment phases.
  - **Automated Video Quality Verification:**
    - **Saved an estimated 15,000 manual work hours annually** by developing and productionizing an OCR, object detection, and tracking system for multilingual marketing videos.
    - Acted as developer and tech lead for productionization.
  - **Multi-modal Content Indexing:**
    - Built a fast image indexer and fine-tuned multi-modal models (CLIP) for caption-based semantic content search. Led the entire development.
  - **Gender-Neutral Text Generation:**
    - Led the team that **won the bronze medal at the 2022 Spanish NLP Hackathon** by creating a

ABOUT ME

Data Science Team Lead with a decade of experience transforming business challenges into high-impact AI solutions. Expert in the full ML model lifecycle, from research and LLM/ASR fine-tuning to deployment and monitoring. Proven ability to lead teams and key projects, delivering significant improvements in quality and efficiency. Seeking a senior role (Data Scientist/ML Engineer) to apply technical vision and hands-on experience.

LINKEDIN

fernandovelascolozano

SKILLS & TECH

- **ML/AI Areas:** Natural Language Processing (NLP), Large Language Models (LLMs), Computer Vision, Multi-modal ML, Deep Learning, Machine Learning, Automatic Speech Recognition (ASR), Research.
- **Frameworks & Li**
- **braries:** Pytorch, HuggingFace, Tensorflow.
- **Prompt Engineering**
- **MLOps & Cloud:** MLFlow, AWS, Azure.
- **Programming Languages:** Python (Expert), SQL, R, Scala
- **Tools & Others:** Git, Docker

generative model for ungendered Spanish texts. Defined metrics and led model training.
    - ○ **Applied Language Models:**
        - ■ Utilized various architectures (BERT, T5, LaBSE) for fine-tuning, text generation, and alignment, acting as both developer and tech lead.
- **Technology Summary:** LLMs, Language Models, ASR, Multi-Modal Models, Pytorch, HuggingFace, Computer Vision, NLP, AWS, Azure, MLFlow.

Feb 2020 – Present (Guest)

Lecturer | Afi Escuela de Finanzas

- Delivered lectures for the Master in Artificial Intelligence program, focusing on Deep Learning foundations and its application to Image Processing.
- Taught a comprehensive Computer Vision curriculum, covering topics from core concepts like Object Detection and Variational Autoencoders (VAEs) through to advanced generative models such as Stable Diffusion.

Mar 2019 – Jan 2020

Senior Data Scientist | Dive.tv

- Led Computer Vision projects, focusing on recognition, tracking, and pose estimation techniques.
- Managed the full ML lifecycle, including research, development, and initial deployment efforts.
- Oversaw team leadership responsibilities and managed customer relationships.
- **Key Project:** Developed a multi-camera system to track individuals across different locations.
    - ○ Implemented fast face/body recognition models (e.g., Facenet, FasterRCNN) and advanced tracking (DeepSORT).
    - ○ Applied emotion recognition models using both CNNs and pose-based approaches.
- **Technology Summary:** Pytorch, Tensorflow, Computer Vision, AWS.

Jul 2015 – Mar 2019

Data Scientist | StratioDB

- Developed and applied Machine Learning models (Classic ML, CV, NLP) to large-scale datasets for prominent clients.
- Delivered diverse projects including recommender systems, Time Series analysis, Customer Journey mapping, and Next Best Action prediction for major clients in retail, energy, and telecommunications sectors.
- Gained extensive experience in handling and extracting insights from big data environments.

- **Technology Summary:** Tensorflow, Computer Vision, NLP, Classic ML.

Jan 2011 – Jul 2015

ATM Software and Aeronautic Model Developer | Indra

- Developed software for Air Traffic Management (ATM) systems.
- Created and refined theoretical aeronautic models.
- Built a strong foundation in software development and complex system modeling.

Jun 2006 – Jan 2011

Researcher | Universidad de Salamanca

- Conducted advanced research in the field of Algebraic Geometry as part of a Ph.D. project.
- Developed strong analytical, problem-solving, and mathematical skills.

EDUCATION

2008-2009
Master's Degree | Universidad de Salamanca

Advanced Mathematical Methods in Physics.

2014-2015
Master's Degree | U-TaD

Data Science

2000-2005
Bachelor of Science. Mathematics | Universidad de Salamanca

Major in Algebraic Geometry