

PEDRO GONZÁLEZ-BARRACHINA

Senior Machine Learning Engineer

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SUMMARY

Senior Machine Learning Engineer with 4+ years of expertise pioneering AI solutions in biometric technology and computer vision. Track record of optimizing production ML systems, achieving #1 rankings in NIST competitions, and reducing infrastructure costs by 80%. Published researcher advancing the field of continual learning, with proven ability to transform research breakthroughs into scalable production systems. Skilled in leading cross-functional teams and architecting end-to-end ML solutions that drive business impact.

SELECTED SKILLS

Machine Learning & AI: Computer Vision (Detection, Segmentation, Depth Estimation, OCR), Biometric Systems (Face Recognition, PAD), Deep Neural Architectures, Self-Supervised Learning

Frameworks & Tools: PyTorch, ONNX, TensorFlow, OpenCV, Pandas, Streamlit, MLFlow, Dash, LangChain

Infrastructure: AWS Cloud Services, Google Cloud Platform, Nvidia Triton Inference Server, FastAPI, Vector Databases (Qdrant, Chroma)

Development: Python, SQL, Data Pipeline Optimization, CI/CD, Microservices Architecture

PROFESSIONAL EXPERIENCE

Senior Machine Learning Engineer

Jan 2024 – Present

Alice Biometrics

Remote

- Lead cross-functional machine learning projects, defining technology requirements, collecting datasets, training models, and integrating them into scalable production systems
- Improve ML infrastructure by implementing Nvidia Triton Server, slashing inference latency by 200% while reducing cloud costs by 80%
- Redesigned legacy systems into modular microservices architecture, improving system reliability and enabling rapid feature development

Machine Learning Engineer

Jan 2023 – Jan 2024

Alice Biometrics

Remote

- Development of facial presentation attack detection system, securing #1 position in NIST FATE PAD evaluation against 82 competitors
- Implemented novel deep learning architectures for real-time video analysis and 3D depth estimation
- Engineered state-of-the-art document processing pipeline combining detection, keypoint detection and matching, text detection and OCR

Deep Learning Engineer

Jan 2021 – Jan 2023

Facephi

Alicante, Spain

- Participate in Face Recognition and Face PAD teams achieving top 20% position in FRVT NIST
- Develop automated system that increased user conversion rates by 10% while reducing false rejections
- Participate edge deployment solutions, successfully implementing ML models on resource-constrained devices

PUBLICATIONS

"Continual Learning for Music Classification" - ISMIR 2024 (Paper, GitHub):

"Continual Learning for Document Image Binarization" - IBPRIA 2023 (Paper, GitHub)

EDUCATION

PhD, Computer Science

In Progress

University of Alicante

Remote

MS, Acoustical Engineering

2019

Technical University of Madrid

Madrid, Spain

BS, Electrical Engineering (Sound and Image)

2019

Technical University of Madrid

Madrid, Spain