# DORAMAS BAEZ BERNAL

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*Machine Learning Engineer with over 5 years of experience working at the intersection of data, computer vision, generative AI, and language. Experience spans research centers and innovative tech companies, contributing to the development and deployment of cutting-edge ML and AI solutions. Areas of expertise include Large Language Models (LLMs), multimodal systems, and neural radiance fields. Demonstrated expertise to co-lead teams in planning, executing, and delivering successful products, with a strong focus on customer and market needs.*

## EXPERIENCE

**The Agile Monkeys**    Machine Learning Engineer    2023 — 2025

- *Researched projects involving conversational AI models (LLMs, speech-to-text, text-to-speech) and large multimodal models (vision and text).*
- *Developed core technologies for PrivateGPT and AI Findr.*
- *Successfully managed the RePeople project, coordinating efforts across technical teams and client stakeholders.*
- *Designed and trained custom embedding models for multiple clients, including a major e-commerce client, resulting in a 12% improvement in model accuracy*
- *Analyzed the capabilities and limitations of LLMs and prompt engineering.*

*R&D Team · AI Model Development · Core Development · Product Strategy · Team Collaboration*

**Arquimea Research Center**    Machine Learning Researcher    2021 — 2023

- *Researched neural radiance fields for advanced 3D reconstruction and rendering.*
- *Achieved real-time rendering for radiance fields, preceding the development of Gaussian splatting techniques.*
- *Enhanced the radiance fields architecture by integrating a temporal dimension, enabling real-time dynamic radiance fields.*
- *Developed the foundational framework that facilitated the creation of the startup Volinga.*
- *Achieved H.264 image/video compression performance through the implementation of neural video compression algorithms.*

*Research · AI Model Development · Real-Time 3D Rendering · Neural Radiance Fields · Neural Video Compression · Product Strategy*

**Desic**                                                        Software Engineer        2019 — 2020

- *Software Developer for embedded systems, primarily using C++.*
- *Designed and implemented a real-time GPS tracking solution for monitoring bus routes across the island.*
- *Contributed to improving passenger service reliability through accurate tracking and monitoring systems.*

*Software Development · Embedded Systems · Product Strategy · Team Collaboration*

## EDUCATION

**University of Las Palmas de Gran Canaria**                                    2020 - 2022
Master's degree in Artificial Intelligence and Numerical                        *Las Palmas, ES*
Applications in Engineering
⊘ Master Thesis: *A Study on Feature Learning for the Re-identification of Participants in Mountain Races*

**University of Las Palmas de Gran Canaria**                                    2016 - 2020
Bachelor's Degree in Computer Science                                           *Las Palmas, ES*
⊘ Bachelor Thesis: *Study and Adaptation of Deep Neural Networks for Object Detection Tasks in Images*

## PROJECTS

**NewsAskAI**   *Personal project: Open-source project using Retrieval-Augmented*    ⊘ Link    2025
*Generation (RAG) to enable users to ask questions about the latest news.*

**RePeople - AI Search**   *Team leader: Led the implementation of AI Findr for*    ⊘ Link    2024
*RePeople a client.*

**AI Findr**   *Core researcher: Contributed to building an AI-powered search engine*    ⊘ Link    2024
*optimized for fast and accurate results.*

**PrivateGPT**   *Core developer: A secure and simple core for accessing relevant in-*    ⊘ Link    2024
*formation intuitively.*

**DERT-finetune**   *Personal project: Fine-tune Facebook's DERT architecture.*    ⊘ Link    2021

**MatLibraryPy**   *Personal project: A numerical library for matrix and vector oper-*    ⊘ Link    2021
*ations.*

## CERTIFICATES

**Fundamentals of Accelerated Computing with CUDA C/C++**  *� Link*  2022
*Nvidia*

**Natural Language Processing with Probabilistic Models**  *⌕ Link*  2022
*Coursera*

**Natural Language Processing with Classification and Vector Spaces**  *⌕ Link*  2021
*Coursera*

## ARTICLES

**Navigating New Frontiers: Building a Spanish Multimodal Model for Enhanced Search Capabilities**  *⌕ Link*  2024

**How Multimodal AI can transform search in e-Commerce**  *⌕ Link*  2024

**Reranking Embeddings to improve how they Retrieve Information**  *⌕ Link*  2024

**The Effect of Language in Semantic Search - PrivateGPT**  *⌕ Link*  2024

**Understanding Completeness and Accuracy in Large Language Models**  *⌕ Link*  2023

**State of the AI: latest AI news and resources**  *⌕ Link*  2023

**Building an Automated Coding Model for Our High-Level Abstraction Framework**  *⌕ Link*  2023

## TECHNICAL SKILLS

- Programming Languages: Python, Bash, C++, Cuda, TypeScript, JavaScript, MATLAB
- Frameworks & Libraries: Pytorch, PyTorch Lightning, transformers, scikit-learn, pandas, nltk, matplotlib, onnx
- Tools & Platforms: Docker, Linux, AWS, git, GitHub
- Soft Skills: Problem-Solving, Proactive, Versatile, Technical Communication, Team Collaboration