



Berta Fernández de la Morena

Artificial Intelligence Engineer · Acciona ENERGÍA

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LANGUAGES

Spanish: Native

English: Advanced (C1-C2)

French: Medium (B2)

SKILLS

PROGRAMMING LANGUAGE

Python, Matlab, C, C++, Java, HTML, SQL

FRAMEWORKS

OpenCV, Numpy, Keras, PyTorch, Scikit, Tensorflow, Pandas, pytest, unittest, conda

SOFT-SKILLS

Teamwork, Self-Organised Working, Teaching, Organisation

OTHER OS/SW/TOOLS

Linux, Windows, LaTeX, Command Line, Git, Microsoft Azure, AWS, Docker

VOLUNTEER SERVICE

Acciona

2021 - Present

Avance Association

2021-2022

Lo que de Verdad Importa

Foundation

2015

Mary Ward Foundation

2014

AWARDS

Academic transcript award in IPCV
M.Sc

Academic transcript award in TE B.Sc
2019 by fulfilling the requirements
established by the Community of
Madrid

PROFESSIONAL PROFILE

Being self-improvement and continuous growth one of my pillars, I am consistently pursuing this challenge both personally and professionally.

Thanks to my proactivity and my self-learning capacity, I am constantly developing my technical and analytical skills as well as my adaptability to changes, having built a versatile profile capable of working with different technologies.

Results oriented but enjoying the process.

EXPERIENCE

AI ENGINEER

ACCIONA ENERGÍA · Madrid, Spain · Oct 2023 - Present

- Consistently contributed innovative ideas to enhance business processes and improve operational efficiency.
- Demonstrated experience in leading projects that apply action-oriented technological solutions to complex business problems.
 - Developed an optimizer and energy forecasting model that enhanced the production strategy for Acciona Energia's hydroelectric regulating power plants, resulting in a revenue maximization of up to 15%.
 - Successfully applied time series prediction techniques to volatile data such as energy prices, overcosts, and REE constraints, enhancing decision-making and operational efficiency.
 - Developed an LLM-based algorithm that predicts the most likely set of solutions for technical issues in hydraulic, photovoltaic, solar, and biomass technologies based on historical maintenance data. The system assists operators by suggesting probable resolutions, helping to optimize material preparation and reduce unnecessary trips.

AI ENGINEER

ACCIONA DIGITAL HUB · ROBOTICS, DATA & AI SKILL CENTER · Madrid, Spain · July 2021 - Oct 2023

- Contribution of new ideas to support business improvements
- Adaptation of algorithms to new use cases/Proof-of-Concept
- Management and project development
- Experience in applying action-oriented technological solutions to complex business problems:
 - Develop algorithms to track and detect anomalies in multiple sensor data. Cost savings up to 18% compared to traditional maintenance strategies.
 - Design and develop CV solutions (object detection, semantic segmentation) to increase safety and automate processes which led savings of 100K € per project and year.
 - Build demand forecasting models to support decision-making regarding marketing campaigns in the motosharing business. Revenue maximization during peak demand periods and customer attraction during off-peak times.
 - Use of satellite imagery to prevent damages to the water plants of Acciona Agua, detecting algae bloom or oil spills in the immediate proximity of the intake. Cost savings up to 500K € for this business.
 - Research in the field of Generative AI (GANs), specially in the areas of image generation by training existing architectures to generate unique and novel images for Acciona Cultura

RESEARCH INTERNSHIP

SIGMA TECHNOLOGIES GLOBAL · Madrid, Spain · March 2021 - July 2021

- Applied research on Real-Time Multi-Target Tracking - Computer Vision.

RESEARCH INTERNSHIP

VPULab, Universidad Autónoma de Madrid, Spain · Oct 2019 - June 2020

- Computer vision in the domain of Visual Tracking. Research on CNN tracking algorithms.

EDUCATION

M.Sc., GGP ICADE BUSINESS SCHOOL for Acciona

Universidad Pontificia de Comillas, Madrid-Spain, Acciona · 2023 - Present

- Sustainability, Project Management, Business Strategy & Finances, Future Societies

M.Sc., IMAGE PROCESSING AND COMPUTER VISION

Universidad Autónoma de Madrid, Madrid-Spain, Université de Bordeaux, Bordeaux-France, Pázmány Péter Katolikus Egyetem, Budapest-Hungary · 2019 - 2021

- Erasmus Mundus Joint Master's degree
- M.Sc Thesis: Research on Real-time multi-target tracking (SIGMA TECHNOLOGIES GLOBAL)
- Augmented Reality Application - UNITY (Université de Bordeaux, Bordeaux, France)
- Research on recent Object Tracking Model Free algorithms based on CNN (VPULab, EPS, Universidad Autónoma de Madrid, Spain - Université de Bordeaux, Bordeaux, France)

B.Sc., TELECOMMUNICATIONS ENGINEERING

Universidad Autónoma de Madrid Madrid-Spain · 2015 - 2019

- Processing and Audio & Video Communication Profile

OTHER COURSES

GOOGLE CLOUD PLATFORM: BIG DATA & ML FUNDAMENTALS

Acciona · July 2021

WORKSHOP - DEEP LEARNING FOR COMPUTER VISION

Angelica I. Aviles Rivero (Research Associate, University of Cambridge) · October 2020

WORKSHOP - DEEP LEARNING FOR COMPUTER VISION

Insight Centre for Data Analytics - Dublin City University (DCU) · March 2020
Coursera (University of Georgia) · Sep 2020

CYBERSECURITY AND THE IOT

WORKSHOP - BUILDING A R+D TEAM IN A COMPANY

Álvaro Villegas (Nokia Bell Labs - Spain) · April 2020

SUMMERCAMP - IMPACT OF ARTIFICIAL INTELLIGENCE ON DEFENCE AND SECURITY

Universidad Politécnica de Madrid (UPM) and the National Defence Studies Centre (CESEDEN) · June 2019

LOCAL COMMITTEE MEMBER - 23rd Iberoamerican Congress on Pattern Recognition

Universidad Autónoma de Madrid · November 2018

CONFLICT MEDIATION

Bienaventurada Virgen María, Las Irlandesas, Madrid, Spain · 2014