

ANTONIO TORO JAÉN

Software Engineer | Machine Learning & AI

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ABOUT

Computer Engineer with experience in software development and a specialisation in Artificial Intelligence and Machine Learning. Practical experience in NLP, Transformers and the fine-tuning of large language models (LLMs) through academic research, recognised by a second-place finish at IberLEF 2025 and a scientific publication. Currently studying a Master's degree in Artificial Intelligence and aim to focus my career on the development of ML and AI solutions.

EXPERIENCE

Analyst Fullstack Developer

Tragsatec | September 2025 - Present

Tech Stack: Java · Spring boot · Python · Angular · Docker · Haystack · Qdrant · GIS

- Build and maintain enterprise applications using Java, Spring Boot, and Angular, creating REST APIs for hydrological data management and integrating SQL databases and GIS layers. Contribute to application modernization and CI/CD workflows using Azure DevOps.
- Develop Python tools for database migration and a proof of concept for a RAG-based document assistant, using FastAPI, Haystack, Qdrant, and LLMs to retrieve information and answer questions from documents.

Junior Frontend Developer

Fujitsu Technology Solutions | September 2019 - September 2020

Tech Stack: Angular · Git · React Native · SCRUM

- Developed web interfaces using Angular for the EMASA project, supporting Málaga's municipal water utility.
- Implemented mobile application features using React Native for XEMIO, a digital platform supporting breast cancer patients at home, and contributed to the T-mobilitat public transport project.

PROJECTS

MySonGyny — Classification of misogyny using NLP y LLMs

Bachelor's Thesis | Python · PyTorch · Hugging Face · Transformers | 2024–2025

- Research and comparison of Transformer models and LLMs for the binary classification of misogynistic texts.
- Experimentation and fine-tuning of models from the DeepSeek, Llama and Qwen families, evaluating their performance on classification tasks.
- Second place at IberLEF 2025 and publication of a scientific article in CEUR-WS.

RoadDamage AI — Detecting road damage using computer vision

Personal project | Python · PyTorch · YOLO · OpenCV | (In progress)

- Training and evaluation of an object detection model to identify potholes and cracks in images.
- Performance evaluation using mAP, precision and recall metrics.

EDUCATION

2026 - Present	**Master's Degree in Artificial Intelligence**	Universidad Internacional de la Rioja (UNIR)
2020 - 2025	**Bachelor's Degree in Software Engineering**	Universidad de Huelva (UHU)
2022 - 2023	**Erasmus+ Programme - Academic mobility**	Riga Technical University (RTU)

SKILLS

- **AI & Machine Learning:** Python, PyTorch, Hugging Face, Transformers, NLP, LLMs, Fine-tuning, RAG.
- **Backend & Software Engineering:** Java, Spring Boot, FastAPI, APIs REST, SQL, Git.
- **Tools and infrastructure:** Docker, Qdrant, Haystack, Azure DevOps, CI/CD.
- **Languages:** Spanish (Native), English (B2)