

Marco Mongi

marcomongi@gmail.com • LinkedIn: marco-mongi • GitHub: marcoom • Río Cuarto, Argentina

Professional Summary

Engineer specialized in AI and Data Science, focused on building production-ready ML systems. I build end-to-end solutions across computer vision, data pipelines and LLM-based systems, applying strong Python engineering practices, clean code and scalable architectures. Led multidisciplinary teams and technical initiatives, including Industry 4.0 and satellite projects approved by NASA boards. Languages: English (C2), Spanish (native).

Work Experience

- Ascentio Technologies** Río Cuarto, Argentina
Systems Engineer, Product Owner July 2022 – July 2025
- Led an end-to-end industrial computer vision system with edge-based multi-object detection and tracking from multiple cameras along a conveyor belt, monitoring tens of thousands of products daily via centralized KPI dashboards.
 - Launched the company's **artificial-intelligence division**, transferring expertise to the team and enabling the acquisition of new clients in computer vision and Industry 4.0.
 - Managed teams of up to 10 people as **Product Owner** and **Systems Engineer**, leading the Technological Infrastructure and Science Data Processing subsystems of the SABIA-Mar satellite mission.

- Software Engineer** July 2022 – January 2023
- Delivered 20+ **functional and performance enhancements** to the L0 processor of the SABIA-Mar satellite mission, strengthening a production-grade satellite ground processing pipeline.

- Data Scientist** September 2020 – December 2020
- Developed a platform for **automatic crop detection** in Python, achieving 80% accuracy using supervised classification algorithms applied to time series of multi-spectral satellite images.

Education

- National University of Córdoba (UNC) / MundosE** Córdoba, Argentina
University Diploma in Data Science 2024

- National University of Río Cuarto (UNRC)** Río Cuarto, Argentina
Telecommunications Engineering, Radiocommunications Orientation. GPA: 8.71 2013 – 2022

COURSES AND CERTIFICATIONS

- 2025 | **English Certificate** | EF SET | **C2 Proficient**
2025 | **Machine Learning Specialization** | Stanford
2025 | **Gen AI Intensive Course** | Google / Kaggle
2025 | Apache **Airflow 3 Fundamentals** | Astronomer

Skills

- **Python:** OOP, FastAPI, System Design, unit testing (pytest, unittest, POSTMAN), system and end-to-end testing (Robot, Behave), Gradio, Streamlit.
- **Machine & Deep Learning:** NumPy, Pandas, Scikit-learn, MLflow, supervised/unsupervised models, reinforcement learning, time-series forecasting, PyTorch, Keras, TensorFlow, Hugging Face.
- **LLMs / NLP:** API (OpenAI, Anthropic, Google), local-hosted, prompt engineering, multi agents (CrewAI), LangChain, n8n, RAG, TTS / STT.
- **Computer Vision:** object detection and segmentation, OpenCV, digital image processing, GIS.
- **Data Engineering:** ETL, Apache Airflow, **SQL**, NoSQL (MongoDB, vector), dashboards (Tableau, Grafana).
- **DevOps & Cloud:** Git, GitHub, & GitHub Actions, CI/CD, Docker, Docker Compose, Kubernetes, high concurrency architecture, microservices, AWS, GCP.
- **Product Delivery & Leadership:** Agile/Scrum frameworks (JIRA, Trello), end-to-end Product Ownership, Project Management, team leadership.

Selected Projects

- **Local LLM + RAG Platform (n8n):** Offline chat with self-hosted LLMs (Ollama) + RAG over private documents (embeddings + Qdrant vector DB) and workflow automation via n8n, orchestrated with Docker Compose.
- **License Plate Recognition:** Real-time license plate detection (YOLO) + tracking (DeepSORT) + reading (EasyOCR), featuring a Gradio web UI.