

Marco Mongi

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Work Experience

Ascentio Technologies

Río Cuarto, Argentina

Product Owner, Systems Engineer

July 2022 – July 2025

- 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.
- 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.
- Led end-to-end a computer-vision production-control system for an industrial plant, covering design, production rollout and ongoing maintenance. The solution blends multi-object detection and tracking, **edge computing**, **IoT protocols** and real-time dashboards, enabling performance and efficiency monitoring.
- Implemented over 20 improvements to the **SABIA-Mars** L0 processor of the SABIA-Mars satellite mission in **Python**, fulfilling client-required functionalities within a 3-month timeframe.

Ascentio Technologies

Río Cuarto, Argentina

Intern

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.

Faculty of Engineering, UNRC

Río Cuarto, Argentina

Intern

2018 – 2019

- Contributed to the project "Improving university campus accessibility – **Hearing loops**"; implementing systems.
- Public speaking & training materials (English/Spanish); effective communication.
- English proficiency: C2 EF SET, C1 **Cambridge FCE**.

Education

Stanford University Online

Online

Machine Learning Specialization

2025

National University of Córdoba / MundosE Córdoba, Argentina

Córdoba, Argentina

University Diploma in Data Science

2024

National University of Río Cuarto (UNRC) Río Cuarto, Argentina

Río Cuarto, Argentina

Telecommunications Engineering, Radiocommunications Orientation.

2013 – 2022

GPA: 8.71

Courses and Certifications

2025 | EF SET English Certificate | EF SET | C2 Proficient

2025 | Gen AI Intensive Course | Google / Kaggle

2024 | Introduction to Statistics | Stanford University

2017 | First Certificate in English | University of Cambridge | Grade A (C1)

Skills

Technical Skills: Python (OOP, NumPy, Pandas, Scikit-learn, pytest, FastAPI, CI/CD), R (basic analytics) and MATLAB programming, Databases: SQL, Machine Learning & AI: supervised/unsupervised models, reinforcement learning; time-series forecasting; deep learning with PyTorch and Keras/TensorFlow; LLMs; generative AI & prompt engineering, Computer Vision: object detection and segmentation, OpenCV, digital image processing, remote sensing imagery, GIS, Data Engineering: ETL pipelines and Apache Airflow orchestration, Data Visualisation & Dashboards: Tableau, PowerBI, Grafana, Web/UI Prototyping: Gradio, Streamlit, DevOps & Cloud: Git, GitHub & GitHub Actions, Docker, Docker Swarm, Kubernetes, high-concurrency architecture, AWS, GCP, IoT & Edge Computing: MQTT, Raspberry Pi, hardware accelerators, Systems Design: scalable Industry 4.0 and satellite applications (frontend, backend, databases), Testing: unit (pytest, unittest), system (Robot/Behave) and end-to-end, Product & Project Management: Agile/Scrum (JIRA), Product Ownership, Product Management, Documentation & Reporting: LaTeX, academic writing, Hardware & Prototyping: Arduino, robotics, sensor integration, soldering, 3D design (SolidWorks/Fusion 360) and 3D printing (FDM), Operating systems: Windows & Linux, Public speaking & training materials(English/Spanish); effective communication, English proficiency: C2 EF SET, C1 Cambridge FCE

Soft Skills: Product vision and strategic road-map definition, Backlog management and feature prioritization, Effective stakeholder communication, expectation management and negotiation, Effective communication of technical concepts to non-technical audiences, Cross-functional leadership and coordination, fostering teamwork, Risk, scope, resource and budget management, Systems analysis and evaluation; KPI- and OKR-driven decision making, Continuous improvement and innovation of processes, products and working methods, Mentoring, knowledge transfer and peer reviews, Customer-centric focus, Emotional intelligence and empathic collaboration, Critical and analytical thinking, complex problem solving, Time management and high-quality delivery under pressure, Continuous learning and adaptability to change

Languages

Spanish: Native

English: C1 (ESOL) / C2 (EF SET)

Projects

I have developed a comprehensive portfolio of AI and data engineering projects, including:

- Computer Vision:Real-time license plate detection (YOLOv8, DeepSORT, OCR) and automated blood cell counting (YOLO+SAM2 pipeline)
- NLP & LLMs:Local AI chat platform with RAG and agentic workflows, interactive story generator with bilingual voice interaction, and Whisper-based transcription studio
- Machine Learning:Deep reinforcement learning lunar landing controller, CNN-based digit classification (99.49% accuracy), unsupervised anomaly detection with Isolation Forests for health monitoring, time-series energy fore-casting (regression), and survival probability predictor
- Data Engineering:Apache Airflow ETL pipelines and real-time anomaly streaming with TIG stack

All projects feature production-ready practices including Docker containerization, interactive UIs, and comprehensive documentation. As a hobby, I also enjoy working with electronics (Arduino, Raspberry Pi) and 3D printing. For additional details on the projects, visit my GitHub profile.