IGNACIO MANUEL BOSCH

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PROFESSIONAL SUMMARY

AI & Machine Learning Engineer with a strong background in Computer Vision, Deep Learning, and Metaheuristics Optimization. Over 5 years of experience developing ML solutions, deploying models, and leading R&D projects in AI-driven applications. Skilled in Python, TensorFlow, PyTorch, and MLOps workflows.
Published author in IEEE and active participant in international AI conferences.

TECHNICAL SKILLS

Programming & Tools: Python, R, Pandas, NumPy, Matplotlib, Seaborn, Flask, Streamlit, LangChain, CrewAI, Ollama, HTML/CSS/Bootstrap, Tkinter, Git, SQL Server, MongoDB, Tableau.
Machine Learning & AI: Scikit-Learn, TensorFlow, PyTorch, Computer Vision, NLP, Deep Learning, Metaheuristics, Reinforcement Learning, MLOps.
Cloud & Deployment: Azure (AZ-204 Certified), Docker, REST APIs.
Languages: English (B1), Italian (B2), German (A2).

PROFESSIONAL EXPERIENCE

Senior R&D Developer - AI & Data Science

CYS Informatica - Argentina | 2020 - Present
- Led AI research and development for Computer Vision and NLP applications.
- Developed data pipelines and deployed ML solutions using Python, TensorFlow, and PyTorch.
- Implemented data preprocessing, feature engineering, and model optimization, improving accuracy by 15%.
- Managed deployment environments and cloud integration on Azure.

Adjunct Professor - Artificial Intelligence

University of Mendoza - Argentina | 2022 - Present
- Teach AI concepts, ML algorithms, and hands-on Python-based implementations to engineering students.
- Designed academic projects applying Computer Vision, NLP, and LLMs for real-world problem solving.

SELECTED PROJECTS

- Ovarian Tissue Analysis with Deep Learning - Designed CNN-based pipeline for detection in biomedical images (IEEE ARGENCON 2022).
- Metaheuristics for Neural Network Optimization - Applied evolutionary algorithms for disease prediction using transcriptomics data.
- LLM-powered Recruitment Assistant - Developed RAG system integrating LangChain, Ollama, and vector databases.

EDUCATION

Bioengineering - University of Mendoza, Argentina | 2012 - 2020

CERTIFICATIONS

- AZ-204 Microsoft Azure Developer Associate - Microsoft
- TensorFlow Developer Certificate - TensorFlow
- Deep Learning Specialization - Andrew Ng, Coursera
- Scrum Master Certified - Scrum Alliance
- Python for Computer Vision with OpenCV and Deep Learning - Udemy
- Data Science - Mundos E, UNC

PUBLICATIONS & CONFERENCES

- Detection of corpora lutea in ovary stained tissue with Deep Learning, IEEE ARGENCON 2022.
- Effect of hyperthermia on bovine follicles morphology, I Congreso Interuniversitario I+D+i 2021.
- Presenter at Latin American AI Conference Khipu 2025 and IEEE ARGENCON 2022.