



IGNACIO CASTILLO FRANCO

Software Developer | Artificial Intelligence & Machine Learning

Python | Linux | C | C++ | Git | Docker

Azure SC-900 certified | Salesforce Platform Foundations & Developer

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Computer Engineer in training with an analytical background in Philosophy and professional experience in the public and technology sectors. Specialized in developing data-based solutions, artificial intelligence, and process automation. Experience developing end-to-end applications in agile environments, including machine learning systems, LLM solutions, and low-level development in C. Strong results orientation, analytical ability, and experience in multidisciplinary collaborative work.

TECHNOLOGY EXPERIENCE AND KEY ACHIEVEMENTS

❖ *Machine Learning:* [Fetal Health Classification System](#)

I designed and deployed a fetal health classification system based on cardiotocography data, aimed at supporting clinical decision-making. Trained and optimized a multiclass AdaBoost model using GridSearch, achieving 95.31% accuracy on test data and an F1-score of 0.95. Implemented a complete application architecture (backend + UI) using FastAPI, Streamlit, and Docker. Presented the solution at the Madrid Innovation Lab, validating its applicability in real contexts. Technology stack: Python, Sci-kit Learn, Docker, FastAPI, Streamlit.

❖ *Artificial Intelligence:* [Content Generator using LLMs](#)

I developed a web application for automated multimedia content generation for social media using language models. Implemented a system based on specialized multi-agents (scientific, financial, and general) to improve generation quality. Integrated RAG (Retrieval-Augmented Generation) architecture to increase accuracy and contextualization. Designed and deployed the full-stack application, combining a scalable backend and interactive frontend. Technology stack: Python, Docker, FastAPI, React, and Langgraph.

❖ *Systems – Unix-style Shell Development:* [Minishell](#)

I developed a command interpreter in C, replicating key Bash functionalities. Implemented pipes, redirections, variable expansion, heredocs, and built-in commands. Managed memory and processes at a low level, enhancing system efficiency and robustness. Strengthened skills in systems programming, debugging, and resource management. Technology stack: C, Unix.

PROFESSIONAL EXPERIENCE

- RPA Developer – NTT Data (2023)
Maintained and optimized RPA automation solutions (UiPath) for an IBEX 35 client. Improved the efficiency of automated processes and reduced operational incidents. Collaborated with technical and business teams in complex corporate environments.
- Madrid Health Service (Servicio Madrileño de Salud) – Statutory Personnel (Current)
Experience in highly demanding operational environments, developing organizational, problem-solving, and stress management skills. Adaptation to structured systems and critical processes, transferable to technological environments.
- Secondary and High School Teacher. Colegio Ágora. Madrid (2007)
Experience in clear communication and explanation of concepts. Development of pedagogical material.

TECHNOLOGICAL EDUCATION

- UAM, Bachelor's Degree in Computer Engineering (GPA 8.02 / 10 ; 135 / 240 ECTS)
- 42 Madrid, level 11.42 Advanced Programming and Systems Development
- NTT Data, Training in RPA (UiPath)
- Factoría F5, Training in Artificial Intelligence and Machine Learning (1,250 hours)

Relevant Courses and Certifications:

- Salesforce Certified Platform Developer
- Salesforce Certified Platform Foundations
- Azure SC-900 (Security, Compliance and Identity Fundamentals)
- Google Cybersecurity
- 42Madrid Piscine Agile Kanban
- UiPath RPA Developer Advanced (UiPath Academy)
- Python Essentials 1 (Cisco Networking Academy)

SKILLS

- **Technical:** Python, C, Linux, Git, Machine Learning (Scikit-learn), LLMs, RAG, FastAPI, React, Docker, RPA (UiPath), Salesforce
- **Methodologies:** Agile, Scrum, Kanban, collaborative development
- **Core:** Analytical Thinking, Problem Solving, Technical Communication

LANGUAGES

- Spanish: Native
- English: Proficient. (B2 – Cambridge First Certificate, B)
- French: Intermediate
- German: Basic