

Carlos Daniel Agamez Palomino

Systems and Computing Engineer | AI & Full Stack Developer

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Education

Universidad Tecnológica de Bolívar (UTB)

Bachelor of Science in Engineering in Systems and Computing Engineering

Cartagena, Colombia

Jan 2020 – Oct 2025

Experience

Software & Artificial Intelligence Developer

Cotecmar

Cartagena, Colombia

Sept 2025 – present

- Designed and developed the **Intecmar AI** platform, integrating microservices with FastAPI and Celery.
- Implemented a Technological Surveillance Agent using LangChain, LangGraph, and Google Gemini Pro.
- Developed a RAG (Retrieval-Augmented Generation) system with ChromaDB for technical document analysis.
- Automated layout and generation processes for interactive digital magazines.
- Orchestrated infrastructure using Docker Compose, PostgreSQL, Redis, and MinIO.

HRBP Intern (Human Resources Business Partner)

Tenaris TurboCaribe

Cartagena, Colombia

Jan 2025 – July 2025

- Designed and developed Power Apps applications to automate HR operational workflows.
- Implemented ETL processes for data consolidation and transformation from various internal sources.
- Performed data analysis using Python and Power BI to support strategic decision-making through interactive visualizations.

Programming and Artificial Intelligence Tutor

Universidad Tecnológica de Bolívar (UTB Talento Tech)

Cartagena, Colombia

Sept 2024 – Nov 2024

- Provided personalized technical and academic tutoring to students on core programming concepts.
- Managed and supervised technical laboratories and resolved development environment issues.

Projects

Intecmar AI Platform

Sept 2025 – present

Comprehensive solution for modernizing technological surveillance through intelligent agents.

- Distributed architecture based on the microservices orchestration pattern.
- Integration of academic APIs (Arxiv, Semantic Scholar) for automated scientific grounding.
- Automated generation of technical reports in Markdown and PDF with AI-generated visual support.

BP Tools – Tenaris TurboCaribe

Sept 2024 – Nov 2024

Suite of technological tools to optimize Human Resources processes.

- Plant Entry Control: Power Platform system for personnel monitoring.
- Report Generator: Automation of overtime reports using Jupyter Notebooks and Power Automate.
- Leave and Medical Records Manager: Python script for bulk data loading into SAP.

Skills

Languages: Python, C++, TypeScript, SQL

Tech & Frameworks: Django, Angular, FastAPI, HTML, CSS, REST Framework, LangChain, Celery

Cloud & Tools: Git, AWS, Azure, Docker, Ansible, Terraform, Power Platform, Hugging Face

Databases: PostgreSQL, MySQL, ChromaDB (Vectorial)

Currently Learning: Model Context Protocol (MCP), Prompt Engineering, Advanced RAG, IA Tools Integration with LLMs