

Alberto Barraís Bellerín

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PROFESSIONAL SUMMARY

Computer Science Engineer with a Master's in Big Data and Cloud Computing (9.34/10), focused on data engineering and AI deployment (MLOps, GenAI). High-performance C++/Python algorithms, real-time massive data processing, cloud (AWS) and model lifecycle (MLflow, Databricks).

EXPERIENCE

Software Engineer <i>COJALI S.L. (JALTEST-ISOBUS Department)</i>	Feb. 2025 – Sep. 2025 <i>Campo de Criptana, Spain</i>
- Designed a proof of concept of a multimodal RAG system (Python, LangChain) to automate technical query resolution: ingestion with Docling (IBM), local embeddings and fallbacks across GenAI APIs (Gemini, DeepSeek, Groq) - Implemented mathematical algorithms in C++ and Python to process real-time data streams from GNSS signals and vehicle sensors, reducing noise and connection anomalies by 14% - Built a simulation framework for the controlled injection and replay of massive geographic data (GPGBA frames), enabling stress testing and automated data validation - Worked with Git and Plastic SCM under Scrum methodologies, ensuring continuous integration of critical algorithmic components	

EDUCATION

University of Castilla-La Mancha <i>Master's Degree in Big Data and Cloud Computing</i>	Ciudad Real, Spain 2025 – 2026
GPA: 9.34/10. Matrícula de Honor (with honors) in Machine Learning (10). Outstanding coursework: Massive Data Processing (9.5), Data Governance and Quality (9.6), Cloud Systems and Services (9.2)	
University of Castilla-La Mancha <i>B.Sc. in Computer Science Engineering – Computing</i>	Ciudad Real, Spain 2021 – 2025
Bachelor's thesis: Kinematic positioning estimation and visualization for an articulated vehicle (9.6/10). Company internship: 10/10. Outstanding coursework: Data Mining (9.6), Knowledge-Based Systems (10)	

PROJECTS

Middleware for Secure Medical Data Exchange (Master's Thesis) <i>Repository</i>	2026
- Designed a Gaia-X-based federated IoT middleware at the <i>edge</i> (Raspberry Pi / ARM) for the secure and sovereign exchange of biomedical data from IoMT devices (European project MAYA) - Implemented clinical interoperability with HL7 FHIR R4, sovereign identity (DIDs, VC-JWT) and end-to-end encryption (mTLS/TLS 1.3, AES-256-GCM) on FastAPI, PostgreSQL and Docker	
Telecom Churn Prediction Pipeline (Lakehouse & MLOps) <i>Repository</i>	2026
- Developed an end-to-end MLOps platform on a Medallion architecture (Delta Lake) in Databricks: Feature Store, experiment tracking with MLflow and batch and real-time inference - Automated pipeline deployment with Delta Live Tables, Databricks Asset Bundles (YAML) and Git integration	

TECHNICAL SKILLS

Languages: Python, C++, SQL, Go, Java, C#, C
Big Data & Streaming: Spark (PySpark), Kafka, Hadoop, Databricks (Delta Lake, Delta Live Tables)
AI, MLOps & GenAI: Scikit-Learn, LangChain, Docling, Hugging Face, MLflow, GenAI APIs (Gemini, DeepSeek, Groq)
Cloud & IaC: AWS (S3, Lambda, Athena, Glue, IAM, IoT Core), Terraform, Docker
DevOps & Data Governance: Git, Plastic SCM, Linux/Bash, OpenMetadata (catalog, lineage, quality), GDPR, EHDS, GAIA-X

CERTIFICATES & LANGUAGES

AWS Academy Graduate – Data Engineering (2026) — Spanish (native) — English B1 CertAcles, B2 in progress
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SOFT SKILLS

Problem solving, autonomy, teamwork (Scrum), technical communication and continuous learning
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