

Anthony Rojas Fuentes

AI Engineer · Data Engineer ·
Computer Engineer · Full-Stack Developer

Alajuela, Costa Rica
ajrojasfuentes@gmail.com · +506 6317 9203
linkedin.com/in/ajrojasfuentes
github.com/ajrojasfuentes
ajrojasfuentes.dev

SUMMARY

Computer Engineer specialized in AI Engineering, Data Engineering, and Full-Stack Development, with hands-on experience designing automated data pipelines, building production-grade AI systems, and architecting end-to-end software solutions on a solid foundation of algorithms, systems design, and computer architecture. Proven ability to translate complex theoretical research into efficient, scalable, production-ready systems. Recognized for rigorous algorithmic problem-solving as a 2024 ICPC World Finalist, and for international research impact through work as AI Engineer and ML scientific researcher at CERN with the LHCb, culminating in a co-authored paper presented as a poster at the 7th BIP 2025 IEEE Conference. Driven by a passion for automating workflows, engineering resilient systems, and shipping innovative solutions from research to production.

CORE SKILLS

Data & DataOps	Apache Airflow, DBT, Apache Spark, Pandas, NumPy, ETL, ELT, BigQuery, Web Scrapping, Pipeline Design, Data Modeling, Data Cleaning, Automation
AI & ML	PyTorch, TensorFlow, Keras, Scikit-Learn, HuggingFace, Generative Models, LLM, Vector Databases, Graph Databases, Pinecone, Neo4j, RAG, LangChain, N8N, Agents, MCP, Prompt Engineering
Full-Stack & APIs	Flask, FastAPI, Spring Boot, React, Vite, Astro, Node.js, Next.js, REST APIs, JWT, Selenium, Playwright, Backend Development, Frontend Development, MVC
Cloud & Databases	GCP, AWS, Azure, Snowflake, PostgreSQL, MySQL, SQL Server, MongoDB, Oracle, Redis
DevOps & Infra	Docker, Kubernetes, Git, CI/CD, GitHub Actions, Supabase, Vercel, Apify, Shell Scripting
Languages	Python, SQL, Java, Kotlin, C, C++, C#, Rust, JavaScript, TypeScript, Bash, HTML, CSS
BI & Visualization	Power BI, Tableau, Excel, Jupyter, Matplotlib, Seaborn, Plotly
Ways of Working	Agile, Scrum, XP, Kanban, Specification Driven Development

EXPERIENCE

Data Engineer · CriticalRiver Inc., Costa Rica	Mar 2026 – May 2026
- Engineered zero-config, real-time data pipelines with Redis streaming into Azure storage, and built DBT transformation models to deliver a reproducible, single-source-of-truth analytics layer. - Designed and secured REST APIs with Flask and FastAPI connected to SQL Server, implementing SAS- and JWT based artifact management flows inside cross-functional Agile teams. - Built automated web-testing workflows with Selenium and Playwright, streaming execution data through Redis and routing system logs to Azure for long-term observability and auditability. - Applied core computer-engineering fundamentals, like algorithmic efficiency, systems design, and data-structure optimization, to keep the data platform performant and fault-tolerant under production load, owning the stack end-to-end from pipeline to API layer.	
AI Engineer & ML Scientific Researcher · CERN — LHCb Experiment (CONARE Academic Internship), Remote	Jan 2025 – Dec 2025
Developed GANU-Lab, a custom AI framework to orchestrate and automate the full life cycle of Data Preprocessing, Model Training, Model Evaluation, and Uncertainty Quantification, of GAN-based Generative Models.	

- Improved model reliability and interpretability in high-variance experimental conditions by researching and implementing **uncertainty-quantification** metrics.
- Co-authored the scientific paper “**Aleatoric and Epistemic Uncertainty Proxies for GAN-Bases Simulations of the LHCb Experiment**”, and presented the research as a poster at the **7th BIP 2025 IEEE Conference**.
- Operated within CERN's large-scale, high-performance computing environment, applying rigorous software-engineering practices, modular architecture, version control, and reproducible experiment design, to research-grade AI code and data workflows.

Software Engineer · Asociación Pro Adulto Mayor de Naranjo (APAMAN), Costa Rica

Jan 2025 – Jun 2025

- Architected and developed a comprehensive **full-stack ERP web platform** for the **third sector (NGO)**, centralizing administrative, financial, and medical operations into a single system.
- Built a **Beneficiary Management System (BMS)** with an integrated **Electronic Health Record (EHR) subsystem**, enforcing strict **Role-Based Access Control (RBAC)** to safeguard sensitive patient data.
- Developed a **Financial Management System (FMS)** featuring **automated recurring billing and subscription workflows**, alongside a **Procurement Management System (PMS)** and **Inventory Management System (IMS)** for end-to-end resource tracking.
- Implemented an **Association Management System (AMS)** to support board governance, and a **Human Resources Information System (HRIS)** to manage staff lifecycles and shift scheduling.
- Unified all subsystems into a single **ERP web platform**, with **automated data-sync workflows**, an **intuitive user interface**, and **centralized RBAC** for consistent security across modules.
- **Tech Stack:** Java, Spring Boot, JavaScript, HTML5, CSS, React, Vite, PostgreSQL, Docker, AWS.

IT Infrastructure & Support Engineer · Tecnológico de Costa Rica (SETIAL), Costa Rica

Jan 2023 – Dec 2025

- Developed and deployed internal automation projects to streamline department operations, leveraging **CI/CD** pipelines while maintaining computer labs and servers for the Computer Engineering Unit.
- Applied core computer-engineering principles — networking, systems administration, and hardware diagnostics — to keep lab and server infrastructure reliable for students and faculty.
- Automated recurring IT support tasks, reducing manual intervention.

EDUCATION

B.S. in Computer Engineering · Tecnológico de Costa Rica (TEC)

Jan 2022 – Dec 2025

MBA in AI and Data Science · Escuela de Negocios Europea de Barcelona (ENEB)

Jul 2026 – Present

CERTIFICATIONS & CONTINUING EDUCATION

- **Data Engineering Bootcamp** · CriticalRiver Inc.
- **Transformational Leadership and Soft Skills Program** · Maxwell Leadership Foundation
- **Scrum Fundamentals** · Scrum Academy

AWARDS & RECOGNITION

- **ICPC World Finalist 2024 & Regional Champion** — Represented Central America at the ICPC World Championship in Astana, Kazakhstan, competing against top global universities in advanced algorithmic problem-solving as Regional Champion (Team “TEC-Silla”).
- **BIP 2025 IEEE Presenter** — Selected for poster presentation at the 7th IEEE International Conference on BioInspired Processing, on AI-driven simulation and output uncertainty-quantification methods developed at CERN.
- **Vice President, ASODEC-AL** (Computer Engineering Student Association – Alajuela, TEC) — Elected for two consecutive terms; managed academic events and student–faculty liaison initiatives (2024–2025).

LANGUAGES

Spanish Native

English Full Professional Proficiency