

Hygor X. Araújo

Data Science Team Leader & AI Systems Architect

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Summary

Data Science Team Leader and Systems Architect with a decade of engineering experience bridging production software architectures and machine learning systems. Currently leading the architecture of an enterprise SaaS platform powered by intelligent multi-agent workflows. Experienced across retail, supply chain, pricing, and electro-energetic infrastructure, with specialized expertise in LLMs, agentic systems, knowledge graphs, and MLOps.

Experience

Data Science Team Leader & AI Architect | Peers Consulting + Technology 2022 — Present

Belo Horizonte, Brazil (Remote)

- Architected enterprise AI capabilities leveraging LLMs, multi-agent workflows, knowledge graphs, and RAG architectures for production decision-support systems.
- Led cross-functional data science teams deploying end-to-end predictive and optimization models integrated directly with enterprise software backends.
- **Technologies:** AI Agents, LLMs, Knowledge Graphs (Neo4j), Python, MLOps, System Architecture.

Architecture & Systems Analyst | ONS (National Electric System Operator) 2019 — 2022

Rio de Janeiro, Brazil

- Promoted from IT Trainee to Systems & Architecture Analyst II, focusing on containerized application platforms, MLOps infrastructure, and mission-critical planning systems.
- Designed and implemented standardized MLOps pipelines with AWS SageMaker to streamline enterprise data science deployments.
- Built automated CI/CD and container delivery workflows, organized company-wide data competitions (DatathONS), and integrated custom NLP pipelines into production systems.
- **Technologies:** AWS SageMaker, Docker, MLOps, CI/CD (Jenkins, GitLab CI), NLP, Distributed Systems.

Software Engineer & Machine Learning Researcher | Imersa · Smarti9 · UFJF 2015 — 2021

Juiz de Fora, Brazil

- Researched and authored a novel semi-supervised learning method using Support Vector Machines and maximum margin classifiers (M.Sc. research).
- Engineered scalable RESTful backend services with Python, Flask, PostgreSQL, Celery, and RabbitMQ, automated via GitLab CI/CD pipelines to AWS.
- Developed native mobile applications and RFID access management systems using MVP architecture and reactive programming.
- **Technologies:** Python, Support Vector Machines, REST APIs, Docker, PostgreSQL, Celery, RabbitMQ.

Technical Skills

- **AI & Machine Learning:** Multi-Agent Systems, LLMs, RAG, Knowledge Graphs (Neo4j), Semi-Supervised Learning, SVMs, Scikit-Learn, PyTorch, Pandas, NumPy, Polars.
- **Architecture & Systems:** Enterprise SaaS Architecture, RESTful API Design, Distributed Workflows (Celery, RabbitMQ), Clean Architecture, SOLID Principles, System Modeling.
- **MLOps & Infrastructure:** AWS SageMaker, Docker, CI/CD (GitHub Actions, GitLab CI, Jenkins, Azure DevOps), Linux/Bash, PostgreSQL.
- **Languages & Certifications:** Python (Advanced), SQL, C1 Advanced English (EF SET Score: 68/100), Portuguese (Native).

Education & Publications

M.Sc. in Computer Science (Computational Intelligence) | UFJF

2017 — 2019

- Thesis: Novel semi-supervised optimization framework for transductive SVM classification.
- **Publication:** *A best-first branch-and-bound search for solving the transductive inference problem using support vector machines.*

B.Sc. in Computer Science | Universidade Federal de Juiz de Fora (UFJF)

2013 — 2017

- Solid foundation in Software Engineering, database architectures, discrete mathematics, and algorithms.