

João Miguel Gomes

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Experience

CG/ZGDV – ICT Innovation Institute – Guimarães, Portugal

Software Engineer (Researcher) | Jul 2023 – Dec 2024

- Deployed solutions to production environments involving large datasets, ensuring data integrity and compliance.
- Developed the architecture for a blockchain-based product traceability system, contributing to EU Circular Economy goals.
- Deployed solutions in production environments and ensured data quality.

FNAC Portugal & Supermercados Preços Baixos – Braga, Portugal

Customer Service & Sales Associate | May 2018 – Jun 2023

- Resolved technical and billing issues with precision, demonstrating strong communication and problem-solving skills.
- Supported team workflows by identifying customer needs and improving service processes.

Education

University of Minho – Braga, Portugal

Integrated Master's in Management Information Systems | Graduation: Apr 2025

- Thesis: *Blockchain-Based Solutions for Product Traceability Platforms*.
- Erasmus Programme - University of Ostrava, Czech Republic: Focus on Data Science, Machine Learning, and Predictive Models.
- Relevant Coursework: Database Structures, Algorithms, Predictive Models, Data Visualization, Machine Learning.

Skills

Programming & Tools: Python, SQL, JavaScript, HTML/CSS, Pandas, NumPy, Scikit-learn, Tableau, Power BI, Git, Excel

Data & MLOps: Data Pipelines, Data Cleaning, Model Deployment, API Integration, Performance Optimization

Soft Skills: Collaboration, Problem Solving, Communication, Analytical Thinking, Creativity

Languages: Portuguese (Native), English (Advanced), Spanish (Advanced)

Projects

Data Warehouse & Analytics

- Engineered a multi-tiered data warehouse enabling predictive modeling and analytics.
- Applied advanced SQL techniques (CTEs, window functions, indexing) for optimized queries.
- Delivered proof-of-concept improving data processing efficiency.

Stack: SQL, PostgreSQL, DDL/DML, Performance Optimization.

LLM-Based Book Recommendation System

- Built a machine learning-powered content-based recommendation system using Python, Hugging Face, and OpenAI APIs.
- Implemented vector similarity search and semantic matching for recommendations.
- Deployed an interactive Gradio dashboard for real-time discovery.

Stack: Python, LangChain, Hugging Face, OpenAI API, Weaviate, Gradio, Pandas, Transformers.

Tableau Sales & Customer Analytics Dashboards

- Designed interactive dashboards visualizing KPIs, sales trends, and customer performance metrics.
- Applied data storytelling principles and optimized data sources for performance.

Stack: Tableau, Data Visualization, Dashboard Design, KPI Analysis.

Automated ELT Pipeline & Real-time Analytics

- Developed a near real-time ELT pipeline orchestrating ingestion, transformation, and visualization from live API data.
- Integrated data workflows with Apache Airflow and dbt for automation, transformation, and lineage tracking.
- Delivered interactive dashboards with Apache Superset powered by a Postgres warehouse.
- Containerized the entire stack for reproducibility using Docker and WSL Ubuntu 24.

Stack: Python, Airflow 3.0, dbt, PostgreSQL, Docker, WSL Ubuntu, psycopg2, Superset, API Integration.