



# Nestor Abraham

Data Engineer at IEA, He/him/his

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## Skills

**Kubernetes and AKS**  
Management & deployment

**Software Development Lyfecycle**  
Implementation, Testing,  
Integration, Project planning

**Artificial Intelligence - Machine learning**  
RAG, langchain & langflow,  
embeddings, LLM & MCP

**Project Management**  
Scrum, SAFE, Horizontal  
structures

**SQL**  
Stored procedures, query fine  
tuning, DB design

**DB Management**  
High availability,  
backup/restoration, server  
maintenance

## Languages

**Spanish**

**English**

**French**

## Summary

I am Nestor, a dual Spanish/Argentinean citizen. I fluently speak & write in Spanish, English & French. I graduated with honours from the School of Computer Science Engineering of Malaga. I have strong skills in programming, project management, SQL code and database administration. Expercience in Successfull delivery of Artificial Intelligence Projects using RAG, automation of Document embeddings and hands on experience with multiple frameworks, libraries and LLM models. Continuous integration/deployment in suites like Gitlab/Github/CircleCI/Drone. I have several years experiences working with Kubernetes deployments and more generally with Infrastructure as a Code. I have experience in REST APIs development in PHP and Python. Well-versed in Quality Assurance principles as well as Linux systems (CentOS, Debian, Ubuntu Server, RedHat). Vim lover. I have a passion for learning new technologies.

## Experience

**International Energy Agency** **September 2021 - Present**  
Data Engineer

🔗 <https://www.iea.org>

❖ **Managed the deployment and ongoing maintenance of backbone infrastructure for Machine Learning and AI solutions**, leveraging technologies such as Milvus Vector Database and RAG frameworks (e.g., Langflow) to support advanced AI capabilities.

❖ **Delivered ETL pipelines with Dagster** to enable self-service document embedding and seamless storage into vector databases, enhancing automated data ingestion and retrieval capabilities.

❖ **Designed and implemented a complete, reproducible lifecycle for Retrieval Augmented Generation (RAG) applications**, providing end-to-end solutions accessible directly to users via Microsoft Teams.

❖ Design, deployed and maintained Azure Cloud infrastructure, including Azure SQL, backups, RabbitMq, MySQL, and GPU capable VMs, to support diverse use cases and multiple production projects across the Agency.

❖ **Led the migration of IEA's internal data dissemination tool to the SIS-CC (.Stat Suite) on Kubernetes (Azure AKS)** — managing feature and budget prioritization, milestone planning, and coordination of an external consultant team (Helmes). Oversaw the design, implementation, and maintenance of Helm charts for front-end and back-end applications, enabling the dissemination of all IEA public data. Implemented GitHub Actions pipelines and managed Kubernetes resources to ensure a robust, production-ready deployment.

❖ **Administered multiple SQL Server environments** with High Availability, performing tasks ranging from query optimization and backup/restoration scheduling to end-to-end database performance tuning.

❖ Provide senior technical direction to working teams and inspire a larger community from across the Agency working in the data related projects, assume hands-on leadership, especially when helping teams resolve complex problems and setting the vision for longer term direction coupled with iterative execution

❖ Implementation of Continuous Integration/Continuous Deployment pipelines (Gitlab on premise, RSconnect server) that are reused by all developers in the Agency. This has improved the development experience and reduced times of test execution and applications deployments vastly.

❖ Implementation of high demand data projects using Azure cloud services (Synapse, Databricks, Dedicated SQL Server pool instances, Data lake)

❖ Migration of a single machine SQL Server/SSRS/SSIS server to a Always On High availability SQL Cluster consisting in multiple dedicated machines for different services (SSIS, Database, SSRS) with failover replicas. Fine tuning and configuration of the machines and applications.

❖ Design and implementation of a Python library that is extensively used by analysts and statisticians for data manipulation and analysis.

**Enreach BV** **September 2020 - August 2021**  
Scrum Product Owner Malaga, Spain

🔗 <https://www.enreach.com/>

❖ Product Owner of a SCRUM team, where the team successfully launched two main products related to Queuing calls systems telecom products.

❖ Analysis and shaping of the work needed by the team to deliver features for different products in timely manner adjusting available budgets.

❖ The team achieved in one year to go from 150+ bugs to 0 by using a bug-hunter role that was rotating within the scrum team members.

**Enreach BV** **June 2018 - December 2019**  
Lead Software Engineer Malaga, Spain

🔗 <https://www.enreach.com>

❖ Refactored the Business Intelligence mobile subscription rating system, achieving up to a 30× reduction in query latency in certain scenarios, significantly improving performance and user experience.

❖ Designed and implemented new features for a Telecommunications B2B Marketplace, enabling enhanced service offerings and streamlined partner interactions.

❖ Managed the migration of large enterprise client accounts across different Operations Support Systems (OSS), ensuring continuity, data integrity, and minimal service disruption.

❖ Implemented and fine-tuned Kubernetes Custom Resource Definitions (CRDs) using Helm 2 & 3 and Flux v2, optimising deployment processes and cluster management for production workloads.

**International Energy Agency** **April 2016 - May 2018**  
Data Engineer Paris, France

🔗 <https://www.iea.org>

❖ **Led the design and development of advanced energy modelling software** for oil fundamentals analysis, with a strong focus on time series data processing and analytics.

❖ **Optimised ETL processes** using Pentaho (open-source edition) for large-scale data scraping into an internal Data Lake, including the implementation of data inconsistency detection, monitoring, and alerting systems.

❖ **Developed an internal REST API** in Python (Flask), integrating multiple libraries for efficient data and time series analysis.

❖ **Created interactive data visualisation dashboards** using Apache Superset (open-source Airbnb project), enabling enhanced insights and decision-making.

❖ **Designed multiple Proofs of Concept (POCs)** comparing different data visualisation platforms, including Looker, Power BI, and Apache Superset, to evaluate best-fit solutions for business needs.

**Ministère de l'Économie** **January 2013 - February 2016**  
Software Engineer Paris, France

🔗 <https://www.economie.gouv.fr/>

❖ **Designed and developed enterprise applications** using the Symfony2 PHP framework, delivering robust and maintainable solutions tailored to business requirements.

❖ **Contributed to a national-scale project** aimed at simplifying and centralising the management of core Human Resources data for the Ministries of France, ensuring streamlined evolution within HR Information Systems.

❖ **Led data integration efforts**, consolidating multiple sources (MySQL, Excel, Oracle) into an Oracle Database using Talend ETL, improving consistency and accessibility of HR datasets.

❖ **Developed Proofs of Concept for data visualisation** using tools such as Pentaho and the HR Access Querying Tool to enhance reporting and decision-making capabilities.

❖ **Created functional test plans** and automated testing processes in the data integration phase, including the development of Excel macros and Java applications to perform large-scale data coherence analysis.

❖ **Co-managed the full system delivery lifecycle** — design, integration, and deployment — of an inter-ministerial platform enabling secure data exchange between state information systems (SIRH, INSEE, CHORUS, etc.) for French civil servant payroll calculations.

❖ **Authored user documentation and technical specifications**, detailing data enrichment processes and XML import procedures for integration with national Human Resource Management Information Systems.

## Education

**University of Málaga** **2011 - 2012**  
Computer Science Master

🔗 <https://www.uma.es/etsi-informatica/>

Final thesis: development of an open data project for parking location based on open data analysis and integration.

**Polytechnic University Warsaw** **2010 - 2011**  
Computer Sciences Erasmus Exchange

🔗 <https://www.elka.pw.edu.pl/>

**University of Málaga** **2006 - 2010**  
Computer Science, Specialisation in Systems Bachelor

🔗 <https://www.uma.es/etsi-informatica/>