

ALFONSO RUA MARTINEZ

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EDUCATION

Universidad Internacional de Valencia

Master of Artificial Intelligence

Spring 2022 - Spring 2023

Universidad de Vigo

Bachelor of Computer Science, specialized in Software Engineering

Fall 2018 - Summer 2021

WORK EXPERIENCE

MSI Sistemas de Inteligencia de Mercado

Sr Data Scientist

Madrid, Spain

June 2025 – Present

- Developed a complete data processing solution (ETLs, orchestration) from scratch using Azure and Clickhouse.
- Data analysis generating KPIs, performance metrics, and data-driven insights for the automotive industry.
- Display the results on a web using graphs, cards and interactive dashboards that are easily accessible to non-technical users.

DXC Technology

Sr Analyst Data Engineering

Santiago de Compostela, Galicia, Spain

November 2021 – June 2025

- Developed and implemented a cloud-based data storage solution for Inditex, using Azure and Snowflake.
- Implemented an efficient data migration strategy to move old pipelines from Hadoop to Spark.
- Collaborated with cross-functional teams to configure the ingest of their own parquet/csv files directly from Datalake.
- Managed data quality checks and automated monitoring to ensure the accuracy of processed data.

Coremain

Software Engineer

Santiago de Compostela, Galicia, Spain

February 2021 - May 2021

- Full stack developer during a 4 month university internship. Java Spring, Hibernate, Javascript.

MAJOR PROJECTS

E3B on Minigrid

February – April 2023

An adaptation of the Meta algorithm E3B about exploration in reinforcement learning, on Minigrid environment.

- Studied and adapted E3B algorithm over PPO for Minigrid agent and low computational capacity systems.
- Used techniques such as Autoencoders (unsupervised) to reduce the problem dimensionality.

Wise Lemon Selector

November 2022

Artificial vision and clustering application to detect quality of lemons from images.

- Developed three robust CNN model systems achieving high precision (over 95%), both from scratch and applying transfer learning + fine tuning on well known nets such as VGG16.
- Used Batch Normalization and Dropout techniques and preprocessing images to prevent overfitting.

Named Entity Recognition for Leet speak

March – June 2021

A pipeline to detect “leet speak” words from a text without using heavy model implementation, written in Java.

- Built for the NLPA project (SING-GROUP), it searches through all the possible permutations of “leet” words.
- Implemented on a web interface with Java Spring Boot to encrypt and decrypt “leet” text easily.

Rural houses web + owner solution

May 2024 – Present

Website to see and book rural houses with integrated payments, also the program to manage reservations.

- Building the front with Js React and backend on Python and MariaDB.
- Developing a program for the owner that has guest management and price recommendations based on many parameters.

SKILLS

PROGRAMMING LANGUAGES

5+ years: Java, Python, SQL, Bash
3 years: Scala, C/C++, C#, Javascript, Matlab
1 year: LISP, PHP, VHDL, Rust, R, Q#

TECHNOLOGIES

Tensorflow, Pytorch, Pandas, Scikit-learn, Qiskit, Matplotlib, Spark, Snowflake, Azure, Amazon Web Services (AWS), Docker, Jupyter, Apache Parquet, Git, MongoDB, Hadoop, JIRA, Oracle DB, Jenkins, Redmine, Enterprise Architect, Visual Paradigm, APIs, SVN, Node

Knowledge

Data Science, Reinforcement Learning, Deep Learning, Supervised & Unsupervised Learning, Fuzzy Logic, Big Data, Data Mining, Agile methodology (Scrum), Embedded software, Ethical Hacking, Mathematics, Physics, Quantum Computing, Software Engineering.

English (CAE), Spanish & Galician

ONLINE COURSES

Convex Optimization I & II (Stanford, 2023), Introduction to Reinforcement Learning with David Silver (GoogleDeepMind 2023), Quantum Computing (Universidad Internacional de Valencia 2023), Mining Massive Data Sets (Stanford 2023), High-Dimensional Data Analysis (Harvard 2022), Introd. to Computational Thinking and Data Science (MIT 2016), Mathematics of Machine Learning (MIT 2015)