ALFONSO RUA MARTINEZ

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EDUCATION

Universidad Internacional de Valencia   Spring 2022 - Spring 2023
Master of Artificial Intelligence

Universidad de Vigo   Fall 2018 - Summer 2021
Bachelor of Computer Science, specialized in Software Engineering

WORK EXPERIENCE

DXC Technology   Santiago de Compostela, Galicia, Spain
Business Applications Engineer   November 2021 - Present

- 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   Santiago de Compostela, Galicia, Spain
Software Engineer   February 2021 - May 2021

- Full stack developer during a 4 month university internship, following Scrum methodology.
- Developed web application GaIA using Java Spring, Hibernate, Maven and also Javascript/HTML/CSS.
- Collaborated with the environment department to gather requirements, resulting in a UI that increased user satisfaction.

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 2023 – Present
Website to see and book rural houses with integrated payments, also the program to manage reservations.

- Building the front with Vite(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

6 years:	Java, Python, SQL, Bash
2 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)