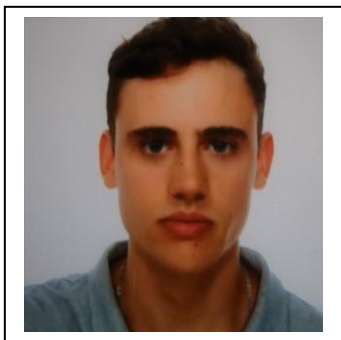




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Profile

Bachelor's degree student in **Data Science and Engineering** at Universidad Carlos III (Madrid), with three years of experience in the Artificial Intelligence field. Currently located in the specialized unit of Artificial Intelligence of BBVA (BBVA AI Factory), working as a Machine Learning Engineer, technically leading one of the bank's Generative AI products. Previously I acquired knowledge mainly in Data Architecture, Big Data and Data Science both at work and educational level. With wide flexibility, to adapt to different branches of Artificial Intelligence as well as also to institutions in any field: medicine, biotechnology, genomics, sports, banking, energy, virtual reality, e-commerce, automotive, finance, transport, defense, home automation, etc.

I am particularly interested in further developing my career in the artificial intelligence sector, specifically as a data scientist or machine learning engineer. I work both individually and collectively.

Academic Experience

- 2023 **Master School of Technology Big Data** - Accenture
- 2018-2022 **Bachelor's Degree in Data Science and Engineering, First Promotion (English Language, Grade VIII)** - Universidad Carlos III de Madrid, **75,1% (A 1st)**.
- 2018 Particle Physics Masterclass given by **CIEMAT** (Centre for Energy, Environmental and Technological Research, Spain).
- 2016-2018 **High School in Sciences** - IES San Juan Bautista, Madrid - Calificación Evau, **10.85/14**.
- 2016 **Compulsory Secondary Education (Honorable Mention)**. Colegio Nuestra Señora del Buen Consejo (Madrid).

Skills

- Programming:
 - Python** (main language): Pytorch, Tensorflow, Keras, NLTK, LightGBM, XGBoost, Scikit-learn, Pandas, NumPy, spaCy, matplotlib, seaborn, pyspark, SHAP, sentence-transformers, LangChain.
 - Others:** R, Matlab, Java, Javascript, Bash.
- Technical Aspects: **Machine Learning** (Linear Models, Ensemble Models, KNN, SVM, Unsupervised Learning), **Deep Learning** (ANNs, CNNs, RNNs, Transformers), **Statistics** (Frequentist Inference, Bayesian Inference, Probability Distributions), **Generative AI** (RAGs, LLMs, OCRs, Vectorial Databases), **Big Data** (Hadoop, Spark, Kafka), **CI/CD** (Git, Jenkins, Docker), **Databases** (SQL, MongoDB, Neo4j, OpenSearch, DynamoDB), **Cloud Computing** (Google Cloud Platform, Amazon Web Services, Microsoft Azure), **MLOps** (Weight and Biases, Hydra, PyTorch Lightning), **Agile Methodologies** (Scrum, Jira), **Microservices** (Docker, Podman, Kubernetes), **IaC** (Terraform).
- Other Aspects:
 - Cooperative, hard working, passionate for sciences.
 - Language Fluency: native Spanish proficiency, high English level.

Work Experience

- 2024-2025 **Machine Learning Engineer, BBVA AI Factory (Boycor)**
Building libraries on top of python frameworks, with the use of pattern designs (Abstract Factory, Singleton, Generator, Decorator), mainly in Python, for a more secure and reusable code applying them to different engines of the bank (categorizer of Germany, Italy and Spain movements, detection of recurrences, identification of subscriptions). Use of pyspark, to process big data ETLs, optimizing runtime in pipelines and identifying bottlenecks with the use of the pyspark DAG to reduce costs of computation. Leading in migrating streaming and batch processes from an on-premise into the [AWS](#) ecosystem in one of the banks' projects.

Defining a generative AI strategy to generate a financial program from different document reports in real-time, reducing risk analysts workload, using a RAG architecture mounted in AWS cloud. Use of microservices (Docker), to mock AWS environment locally, and testing different AWS resources to deploy software safely. Technical support in other projects for the BBVA AI Factory. Working with scrum methodology.

- 2023 **Big Data Engineer and Data Architecture Engineer in AWS (Accenture)**
Focused on defining, implementing, and developing technical solutions based on analytics and data engineering problems, using computational architecture processes in Amazon Web Services. Working with different AWS resources of storage (S3, RDS, DocumentDB), computing (EMR, Lambda, EC2, Glue), monitoring (CloudWatch), orchestration (Datapipeline, Stepfunctions) and interaction (API Gateway, VPCs) of data, applied to energy business. Creation, support and management of optimized complex queries and ETLs based on distributed and parallel processing with pyspark, using structured and non-structured databases, as well as working with different format files (csv, parquet, avro). Use of best practices daily, working with SCRUM and CI/CD methodology.
- 2022 **Researcher and Data Scientist (Cognodata S.L)**
Implementing solutions as a data scientist in the field of deep learning applied to medical and radiodiagnostic imaging to predict and interpret lung pathologies. Among other tasks, focusing on creating applications based on supervised machine learning and time series forecasting, including interpretability and explainability of models.
- 2021 **Madrid City Council Project (Generation and Management of Household and Commercial Waste in the City of Madrid)**
Attendee as data scientist for the analysis and prediction of waste generated in the center of Madrid.

Certifications

- 2024 **SOLID Principles**
Explanation of the basic software design principles, with use cases to practise the content acquired in the program.
- 2024 **Get use of vectorial databases with Generative AI**
Course for creating different RAG systems.
- 2022 **GIT and Github – A version control system from scratch**
Course for the management of version control of files and programs. File management for cooperative work.
- 2022 **Forecasting Models and Time Series for Business in Python**
Course dedicated to the prediction of time signals oriented to the business field.
- 2022 **Spark and Python with Pyspark in AWS for Big Data**
Course dedicated to the analysis of massive storage data with the Spark tool.

Personal Projects

- 2022 **A system for the identification and interpretation of pulmonary pathologies from Chest X-rays images using Deep Learning**
<https://github.com/Rules99/Chest-X-Ray-with-Radiologist-AI>