

SERGIO RODRIGUEZ VALBUENA

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PROFILE

Final-year Data Science and Engineering student with international academic experience and a strong background in Artificial Intelligence and Data Analytics. I am proactive and passionate about creating innovative solutions to solve real-world problems. I am particularly interested in how generative AI is shaping the future.

EDUCATION

Universidad Carlos III de Madrid

Bachelor in Data Science and Engineering

GPA: 7.71/10 (Excellence Scholarship of Madrid 2025)

Madrid, Spain

Sep 2021 – Jul 2025 (Expected)

University of California, Riverside

Bachelor in Computer Science / Exchange Program

GPA: 3.58/4

California, United States

Aug 2023 – May 2024

EXPERIENCE

MissioIA

Generative AI Engineer (Internship)

Madrid, Spain

Jan 2025 – Present

- Designed and implemented custom SaaS solutions powered by generative AI to automate workflows and optimize processes for clients.
- Built full-stack web applications with Python (Flask/FastAPI) and React (JavaScript/TypeScript) in serverless architectures (Firebase, Google Cloud, Azure).
- Integrated LLMs via APIs and intelligent agents to enhance user interaction and support decision-making.
- Key projects: Email response automation, chatbot for database querying, real-time voice assistant, multi-agent system for generating interactive content.

PRGX

Data Analyst I (Internship)

Madrid, Spain

Sep 2024 – Mar 2025

- Automated internal processes with Python and DBT, reducing manual effort and improving efficiency.
- Performed ETL tasks and financial data analysis using SQL and Microsoft SQL Server.
- Collaborated with international teams (Spain, Portugal, UK, Italy) to ensure data quality and integrity.
- Used Power BI for data validation and monitoring.

Hito 1

Machine Learning Intern

Asturias, Spain

Jun – Aug 2024

- Developed a machine learning model for predicting spillway overflow events and their characterization.
- Performed feature engineering on hydrological time-series data, improving model interpretability and generalization.
- Compared model performance using Random Forest and XGBoost, achieving up to 86% accuracy on real data.

PROJECTS

Mobility and Routine Analysis for Mental Health Assessment

Course Project in Data Science · Collaboration with **eB2 (Evidence-Based Behaviour)**

Madrid, Spain

Sep 2024 – Jan 2025

- Analyzed large-scale geolocation data from mobile devices to uncover users' mobility patterns and daily routines.
- Applied clustering algorithms (DBSCAN), entropy analysis, and time-series analysis to extract behavioral insights.
- Created a custom mobility index and transportation classifier.
- Built an interactive dashboard and trained ML models to predict clinical study profiles based on movement patterns.

Deep Learning model for Waste Classification

Course Project · University of California

California, United States

Nov – Dec 2023

- Developed a waste recognition system using CNNs (EfficientNetB0) to classify discarded items and recommend appropriate recycling bins.
- Performed extensive data preprocessing (duplicate removal, augmentation, web scraping) to enhance dataset quality and model performance.
- Achieved 90.3% accuracy and evaluated multiple architectures (ResNet50, MobileNet, DenseNet) to select the best model.

LANGUAGES AND SKILLS

Languages: Spanish (native) · English (C1 Cambridge) · French, German, Italian (introductory coursework)

Programming & Query Languages: Python · JavaScript · TypeScript · R · Matlab · SQL · T-SQL

Frameworks & APIs: React · Flask · TensorFlow · PyTorch · Scikit-learn · XGBoost · OpenAI API · Anthropic API

Python Libraries: Pandas · NumPy · Matplotlib · Seaborn · Streamlit · Transformers (Hugging Face) · OpenCV

Databases: Oracle · MongoDB · Microsoft SQL Server.

Cloud & Tools: Git · Firebase · Google Cloud Platform · Microsoft Azure · DBT · Power BI