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 developing innovative, data-driven solutions.

EDUCATION

Bachelor in Data Science and Engineering - **Universidad Carlos III de Madrid** — Madrid, Spain
GPA: 7.71/10 (Excellence Scholarship of Madrid 2025) — Sep 2021 – Jul 2025 (Expected)

Bachelor in Computer Science | *Exchange Program* - **University of California** — California, United States
GPA: 3.58/4 — Aug 2023 – May 2024

EXPERIENCE

Generative AI Engineer (Internship) at MissioIA (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 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.

Data Analyst I (Internship) at PRGX (Madrid, Spain) — Sep 2024 – Mar 2025

• Automated repetitive tasks 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, UK, Italy) to ensure data quality and integrity, using Power BI for data validation and monitoring.

Machine Learning Intern at Hito 1 (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.

PROJECTS

Mobility and Routine Analysis for Mental Health Assessment — Sep 2024 – Jan 2025

•Collaborated with eB2 (Evidence-Based Behaviour) to analyze large-scale geolocation data from mobile devices, identifying users' mobility patterns and daily routines. Applied clustering algorithms (DBSCAN), entropy analysis, and developed a mobility index to extract behavioral insights. Built an interactive dashboard and implemented machine learning models to predict clinical study groups based on movement patterns and routines.

Deep Learning model for Waste Classification — Nov – Dec 2023

•Developed a waste recognition system for UC 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)
Technical Stack: Python, JavaScript, TypeScript, SQL, R, MATLAB, React, Flask, FastAPI, TensorFlow, PyTorch, Scikit-learn, XGBoost, Hugging Face Transformers, OpenAI API, Anthropic API, Streamlit, OpenCV, Firebase, Google Cloud, Microsoft Azure, Git, DBT, Power BI, MongoDB, Microsoft SQL Server.