# Rodrigo Malagón

#### Mathematician | Data Scientist | Modelling Analyst

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# **Experience**

**Erasmus Mundus Master in Geospatial Technologies**, Castelló de la Plana, Spain **Grant holder** | 09/2023 – 03/2025

- Developed Machine Learning <u>models</u> to forecast the consumption of electricity in the military facilities of the UN in Sudan (SQL, R, Git) and flood classification <u>model</u> with Deep Learning (QGIS, R, Keras, TensorFlow).
- Specialisations: Data Science, Machine Learning, Statistics (Python, R), Databases (SQL), Web Programming (JavaScript, HTML, CSS), and GIS (ArcGIS, QGIS, PostGIS).

**Nielsen**, Mexico City, Mexico (Remote)

Modelling Analyst | 10/2022 - 08/2023

- Implemented machine learning modelling (SAS, R, Python) to drive insights from media and sales time series for US and EU clients leading the CPG sector through attribution models (Unilever, Johnson&Johnson, Ferrero).
- Translated model results to benchmark marketing **KPIs presented** to the client (**Power Query**, **Excel**), to measure the impact of their marketing strategies.
- Collaborated with international teams (data processing, modelling, and customer success teams) across multiple projects.

Universidad de Sevilla, Seville, Spain

Undergraduate Researcher | 09/2021-12/2021

- Conducted undergraduate thesis research at the Department of Geometry and Topology.
- Presented results at a weekly seminar held at the university.

Universidad Nacional Autónoma de México, Mexico City, Mexico

**Assistant professor** | 08/2019 - 09/2021

- Taught Differential & Integral Calculus I-III at the BSc. Mathematics.
- Prepared and presented class material. Graded exams and assignments.

ITAM, Mexico City, Mexico

**Undergraduate Researcher** | 06/2019-09/2019

- Conducted research at the Mathematics Department on Geometric Measure Theory.
- Presented results at the 52nd National Congress of Mathematics.

#### Education

**Universitat Jaume I**, Spain; **Universität Münster**, Germany; **Universidad NOVA de Lisboa**, Portugal **MSc. Geospatial Technologies** | 09/2023 – 03/2025

- Grade: 9.24/10.00.
- Specialisations: Data Science, Machine Learning, Geostatistics, Databases, Web Programming, and Geospatial Analysis.
- Projects:
  - Flood modelling with Convolutional Neural Networks (R, QGIS)

- Analysis of economic gender inequality in Latin America (Python)
- o Deep Learning and Geostatistics model for energy consumption with IoT devices (SQL, R).
- o Deep Learning prediction model for pollution sensors in Castelló de la Plana (R)
- Madrid pollution quarter-level trend assessment in 2023 (R, ArcGIS)
- Bejeweled Web <u>Videogame</u> (Javascript)

## **University of Bristol**, United Kindom

#### Visiting Student | 01/2020 - 07/2020

- Grade: First.
- Specializations: Partial Differential Equations, Logic, Number Theory.
- Membership of the Bristol Data Science Society.

#### **Universidad Nacional Autónoma de México**, Mexico

#### **BSc. Mathematics** | 08/2016 - 10/2022

- Grade: 10.00/10.00.
- Specialisations: Mathematical Analysis, Probability, Statistics, Programming, Vectorial Mechanics, Partial and Ordinary Differential Equations, Topology.
- Thesis: Morse Homology and its Applications.

#### **Technical skills**

- Programming languages: Python, R, SQL, JavaScript, HTML, CSS.
- Software and tools: Google Colab, Google Suite, Jupyter, Git, FME Form and Flow, Tableau, ESRI products & QGIS.
- **Skills:** Data analysis, Machine Learning, Artificial Intelligence, Deep Learning, Statistics, ETL, Web Development, Geospatial Analysis and GIS.
- Languages:
  - Spanish (Native)
  - o English (C1) IELTS Academic (2022), CAE (2016)
  - Catalan (B2) Institut Ramon Llull (2023)
  - French (B2) DELF B2 (2023)
  - German (B1) Goethe Zertifikat B1 (2023)

### Certifications

- Datacamp:
  - Pre-processing for Machine Learning in Python (02/2025)
  - Intermediate Importing Data in Python (02/2025)
  - Introduction to PySpark (02/2025)
  - Introduction to Docker (02/2025)
  - Introduction to Git (02/2025)
  - Understanding Cloud Computing (02/2025)
- Conterra GmbH
  - FME Form and FME Flow (10/2023)
- ESRI
  - Classifying Objects Using Deep Learning in ArcGIS Pro (02/2024)
  - Visualizing Data Using ArcGIS API for Python (02/2024)
  - ArcGIS Survey123 Creating and Publishing Surveys (10/2023)
  - ArcGIS Pro Basics (10/2023)
  - Using GIS to solve problems(10/2023)