

Daniel Ramírez Ruiz

Data Analyst & Python Developer · Streamlit · SQL · R · Applied AI

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PROFESSIONAL PROFILE

Chemical Engineer turned **data analyst and Python developer**. I design and deploy end-to-end applications: data extraction and cleaning, SQL databases, **LLM integration via API**, web interfaces with **Streamlit** and deployment on Linux servers. Author of a hands-on data analysis book with R and **freelance Python and Data Analytics trainer for CodeSpace Academy**. I combine technical rigor, the ability to explain complex topics simply, and intensive use of AI tools in my development workflow.

TECHNICAL SKILLS

Languages	Python, R, advanced SQL
Data & analysis	pandas, NumPy, tidyverse (dplyr, tidyr, ggplot2, lubridate, stringr), dbplyr, advanced Excel
Databases	MySQL, PostgreSQL, SQLite — window functions, CTEs, complex joins, data modeling
Apps & web	Streamlit (multipage, session_state, st.data_editor), Flask + Jinja2, basic HTML/CSS
Applied AI	Anthropic API (Claude) in classification pipelines, prompt engineering, AI in the development cycle
Visualization / BI	Power BI, Tableau, ggplot2
Machine Learning	scikit-learn (intermediate)
Systems & tooling	Linux (Debian, Arch) and VPS administration, Git/GitHub, uv, R Markdown, Quarto

KEY PROJECTS

Selectividad Exam Exercise Classifier · Personal project 2026

Python · Streamlit · SQLite · Claude API (Anthropic) · Linux VPS (Debian 13) — github.com/chusk2/emestrada_parser · selectividad.datoscondani.com

- ▶ Pipeline processing **~400 PDFs spanning 25 years** of Spanish university entrance exams (Chemistry, Mathematics II and Applied Math): statement extraction, automatic cropping to images and storage in SQLite.
- ▶ Automatic topic classification with an **LLM (Claude Haiku)**, guided by taxonomies and topic-specific instructions.
- ▶ **Multipage Streamlit web app** with filters, checkbox selection (st.data_editor), state management and **deployment on a self-managed VPS**; in real use as a teaching tool.

Laboratory Chemical Reagent Inventory · Personal project 2026

Python · Streamlit · SQL

- ▶ Stock management application for chemical products with an **orders/cart module**, built for day-to-day laboratory use.
- ▶ Evolution of an earlier CRUD prototype in **Flask + SQLite** (routes, Jinja2 forms, GET/POST, error handling).

Book «R desde Cero: Curso Práctico de Análisis de Datos» · Author 2026

Hands-on data analysis course in R from scratch (in Spanish) · R · tidyverse · dplyr · ggplot2 · dbplyr + MySQL · R Markdown / Quarto

- ▶ **15-chapter** manual with progressive exercises on the real nycflights13 dataset (**336,000 flights**): transformation, joins, pivoting, dates and visualization.
- ▶ Automated Markdown-to-PDF typesetting with cover page and table of contents.
- ▶ **Expansion in progress**: connecting to **MySQL databases with dbplyr**, with business problems solved in both SQL and R.

Other projects

- ▶ **PDF editor** in Streamlit for viewing and manipulating documents.
- ▶ **Web scraping** of an online bookstore catalog with BeautifulSoup and Selenium.
- ▶ **Interactive financial dashboard** in Power BI · **Synthetic dataset** of lung cancer incidence with Python · **Data cleaning** with SQL, pandas and R.

PROFESSIONAL EXPERIENCE

Python Trainer: fundamentals to intermediate · [CodeSpace Academy \(freelance\)](#)

May 2026

- ▶ Delivered the course from scratch to intermediate level: data types and structures, control flow, functions, file handling and object-oriented programming.
- ▶ Designed hands-on exercises with custom datasets and quick-reference guides (best practices, PEP 8, type hints).

Data Analytics Trainer · [CodeSpace Academy \(freelance\)](#)

May 2025

- ▶ Hands-on data analysis course with Excel, SQL and Power BI: queries, data modeling and dashboard building.

Chemistry, Physics and Mathematics Teacher · [Academia Osorio](#)

2020 – Present

- ▶ Preparing students for the Spanish University Entrance Exams (Selectividad).
- ▶ Developing in-house tools (Python, Streamlit, AI) to automate the creation of teaching materials.

Private Tutor · [Self-employed](#)

2011 – 2020

- ▶ University entrance exam preparation and support in Chemistry, Physics, Mathematics, Biology, English and German. Cambridge exam preparation (B1, B2, IELTS) in 2016–2017.

Earlier experience

2007 – 2011

- ▶ **Laboratory Assistant** · AYG Materials Quality Control Laboratory (2007–2009): chemistry and steel testing laboratories, technical reports with Excel.
- ▶ **Sales Promoter for Acer and AMD** · Carrefour Rosaleda shopping center (2010–2011) · **Science Teacher** · Academia Centros DIF (2011).

EDUCATION

Data Science Bootcamp · [CodeSpace Academy](#)

2024

Machine Learning · [Codebasics](#)

2024

Python Data Science Mastery · [DS4B](#)

2024

Chemical Engineering · [University of Málaga](#)

2014

Additional: Firefox OS App Development (HTML5, 40 h, 2013) · Network and Computer Systems Security (Academia Unitec, 2011).

LANGUAGES

Spanish — Native.

English — **C1/C2**: Certificate in Advanced English (C1); preparing for the Certificate of Proficiency (C2). Fluent technical documentation and professional communication.

German — **B2**: telc Deutsch B2 (2017).