

# Daniel Enrique Rodríguez Espinosa

Email: [daniel.rodriguezespn@uanl.edu.mx](mailto:daniel.rodriguezespn@uanl.edu.mx) | Location: Apodaca, Nuevo León, Mexico

## Profile

Data Analyst with a strong background in bioinformatics and immunology, passionate about transforming complex data into actionable insights. Experienced in transcriptomic analysis, statistical modeling, and machine learning applications. Eager to contribute to scientific and healthcare projects.

## Experience Summary

I have 4 years of experience working with clinical and biological data analysis, combining 2 years of research during my Master's in Immunobiology and 2 years of research during my Bachelor's in Genomic Biotechnology. Throughout this time, I have worked on transcriptomic and immunological datasets, developing pipelines for data cleaning, statistical analysis, machine learning, and visualization. My academic research involved real-world datasets and collaboration with multidisciplinary teams, providing me with hands-on experience in clinical and biological data workflows.

## GitHub & Portfolio

GitHub: <https://github.com/DanielRodriguez1998>

Portfolio: <https://danielrodriguez1998.github.io>

## Academic Background

Master's Degree in Immunobiology

Autonomous University of Nuevo León (UANL), 2025

Bachelor's Degree in Genomic Biotechnology

Autonomous University of Nuevo León (UANL), 2023

## Technical Skills & Tools

Programming & Tools: R, Python, SQL, RStudio, VS Code

Statistical Analysis: t-tests, ANOVA, regression, correlation, Cox models, multivariate analysis

Data Analytics & Bioinformatics: Data cleaning, exploration, visualization (ggplot2, seaborn), differential expression (DESeq2, edgeR), immune deconvolution (CIBERSORT, ESTIMATE), network analysis (WGCNA), dimensionality reduction (UMAP, PCA), clustering (PAM, k-means, HDBSCAN)

Automation: Custom R scripts for preprocessing, analysis, visualization

Frameworks & Libraries: Scikit-learn, Pandas, NumPy, TensorFlow (basic), PyTorch (basic), Git, Matplotlib, Plotly, Bioconductor

## Relevant Experience

Master's Thesis Project:

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- Transcriptomic analysis of breast tumor samples using immunological deconvolution tools, regression models, and dimensionality reduction
- Built an R pipeline for UMAP, PAM, HDBSCAN, with stability checks and immune profiling
- Conducted survival analysis with Cox models and risk group stratification
- Automated data visualization (ggplot2) and filtering with custom R functions
- Generated mutated protein sequences from SNV data for immunogenicity predictions

## Personal Projects:

- Developed Transformer-based multi-label classification model using the MoA dataset (Kaggle, L1000)

## Courses & Certifications

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Google Data Analytics Professional Certificate (Coursera, 2023)

Introduction to Data Science: Statistical Programming with R (UNAM, 2021)

R Programming A-Z: R for Data Science (Udemy, 2021)

Python Programming A-Z: Python for Data Science (Udemy, 2022)

## Languages

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Spanish: Native

English: Intermediate (B1 level)

## Personal Skills

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Analytical thinking and critical reasoning

High autonomy and fast learning of new tools

Clear, effective communication

Strong organizational and results-oriented mindset

Ability to translate complex analyses into actionable insights

## Career Objective

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To collaborate as a data analyst in scientific and clinical projects, delivering bioinformatics, statistical, and visualization solutions for research, healthcare, and applied science. Eager to grow into data science and deep learning in the medium term.