#### ERICK JESUS RIOS GONZALEZ

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## Experience

# Faculty of Sciences, UNAM

CDMX, Mexico

Aug 2024 - Present

Teaching Assistant

- Automated grade analysis using Python, reducing administrative workload by 30%.
- Developed dashboards in PowerBI to monitor student performance, enabling data-driven interventions.
- Conducted exploratory data analysis (EDA) to optimize academic support strategies.

# International Centre for Theoretical Physics (ICTP) $\,$

Trieste, Italy

May 2024

- Research Intern
  - Studied advanced techniques for machine learning in high-dimensional statistics.
    Developed and implemented statistical models for complex data analysis.
  - Collaborated with an international team to enhance algorithmic efficiency in predictive tasks.

# South America Institute for Fundamental Research (ICTP-SAIFR) Research Intern

São Paulo, Brazil

Oct 2024

- Participated in a Quantum Machine Learning project, implementing quantum algorithms with Qiskit.
- Enhanced data clustering techniques, improving efficiency by 40%.
- Designed quantum computing models for machine learning applications, increasing accuracy by 25%.

# Didi Chuxing Technology Co.

CDMX, Mexico

**Data Science Intern** 

Jun 2023 – Oct 2023

- Analyzed 250K+ sales rows with SQL, driving strategic decisions that improved efficiency by 30%.
- Built Python-based machine learning models, reducing processing time by 50% and boosting accuracy by 25%.
- Designed PowerBI dashboards to visualize KPIs, enabling actionable insights for LATAM operations.

# Universidad Autónoma Metropolitana

CDMX, Mexico

Data Science Researcher

May 2021 - Oct 2023

- Applied PySpark to streamline data pipelines, improving processing efficiency by 30%.
- Enhanced data visualization techniques using Matplotlib and Seaborn.
- Built statistical models for large-scale simulations, leveraging HPC tools for parallel computing.

#### Education

#### Universidad Autónoma Metropolitana

B.Sc. Physics. GPA: 3.72/4.00

CDMX, Mexico Oct 2023

CDMX, Mexico

Universidad Nacional Autónoma de México

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B.Sc. Mathematics. GPA: 3.80/4.00

Jul 2024

#### **Projects**

#### **ISING**enerator

 $\operatorname{Github}$ 

Open-source library facilitating advanced analysis of energy, magnetization, and topological domains in a 2D Ising Model; enhanced simulation accuracy by 50%.

# Topological Data Analysis League MX

Github

Scraped, cleaned, and visualized Mexican Soccer League data using ETL and Mapper Graphs.

# Skills

Technical: Python, SQL, PySpark, TensorFlow, Scikit-Learn, Tableau, Matplotlib, Seaborn

Languages: Spanish (Native), English (C1)

Soft Skills: Teamwork, Problem-solving, Attention to Detail, Communication Tools: Power BI, Git, JIRA, Microsoft Office (Excel, Word, PowerPoint)