

Experience

Faculty of Sciences, UNAM

CDMX, Mexico

Teaching Assistant

Aug 2024 - Present

- Automated grade analysis and reporting with **Python**, reducing administrative workload by 30%.
- Built **PowerBI** dashboards to track student performance, enabling real-time data-driven interventions.
- Analyzed academic trends for 8+ students, optimizing support strategies to improve learning outcomes.

International Centre for Theoretical Physics

São Paulo, Brazil

(South America Institute for Fundamental Research)

Undergraduate Researcher

Oct 2024

- Implemented quantum algorithms with **Qiskit**, improving data clustering efficiency by 40%.
- Designed quantum computing models to discover patterns, boosting analysis accuracy by 25%.
- Advanced expertise in quantum gates and optimization algorithms applied to machine learning.

Abdus Salam International Centre for Theoretical Physics

Trieste, Italy

Undergraduate Researcher

May 2024

- Engineered **Python**-based statistical models, reducing machine learning evaluation times by 40%.
- Applied Topological Data Analysis to extract insights from complex datasets.
- Collaborated with 4 data scientists to enhance algorithm precision by 25% on high-dimensional data.

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%.
- Developed **Python**-based data models, reducing processing time by 50% and boosting accuracy by 25%.
- Designed **PowerBI** dashboards to visualize KPIs, enabling actionable insights for LATAM operations. processing time of 30%.

Universidad Autónoma Metropolitana

CDMX, Mexico

Data Science Researcher

May 2021 – Oct 2023

- Leveraged **PySpark** to streamline data pipelines, improving processing efficiency by 30%.
- Enhanced visualizations with parallel computing techniques, cutting computation time by 40%.
- Applied **HPC** tools to optimize data analysis workflows, enabling large-scale simulations.

Education

Universidad Autónoma Metropolitana

CDMX, Mexico

B.Sc. Physics. GPA 3.72/4.00

Oct 2023

Universidad Nacional Autónoma de México

CDMX, Mexico

B.Sc. Mathematics. GPA 3.80/4.00

Jul 2024

Projects

ISINGenerator

Github

Open-source library facilitating advanced analysis of energy, magnetization, and topological domains in a 2D Ising Model; enhanced simulation accuracy by 50% and received 2+ GitHub stars within 3 months

Topological Data Analysis League MX

Github

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

Skills

Technical: C/C++, Java, Python, SQL, MATLAB, R, Power BI

Language: Spanish(Native), English(C1), Japanese(J5)

Laboratory: High Performance Computing (HPC) tools, Convolutional Neural Networks (CNN), Parallel computing techniques, Artificial Intelligence development.

Softskills: Teamwork, Problem-solving, Communication, Leadership, Time Management.