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SUMMARY

Data Scientist and Chemical Engineer with a Master's in Industrial Management and advanced training from MIT. Experienced statistical modeling, machine learning, and data visualization using Python, R, SQL, and Excel builds end-to-end data products: clean data pipelines, train/evaluate models, and communicate results to non-technical stakeholders; comfortable shipping reproducible analyses and lightweight APIs.

Seeking a remote junior-level position in data science or artificial intelligence to grow professionally and contribute to impactful projects.

SKILLS

- **Languages/Tools:** Python (pandas, NumPy, SciPy, scikit-learn, XGBoost), SQL, Jupyter, Git/GitHub, Excel (advanced), Power BI, Version Control (Git)
- **ML/Stats:** Classification & Regression, Predictive Modeling, Feature Engineering, Statistical Analysis, SHAP, Time Series Analysis & Forecasting (AR models), Bayesian basics, Deep Learning (basics), Data Mining, Machine learning
- **Data & BI:** Data Visualization, Business Intelligence, Reporting & Report Automation, Report Generation, ETL (Extract, Transform, Load), Data Wrangling, Data Cleaning, Outlier/NaN Handling, Schema Design, Data Documentation, Exploratory Data Analysis (EDA)
- **MLOps (basic):** FastAPI, Docker (fundamentals), CI/CD concepts, Model Deployment, Cloud Platforms (AWS/GCP/Azure – basics)
- **Research & Soft skills:** Applied Research, Algorithms, Academic Research, Research Methodology, Teaching, Stakeholder Communication, Technical Writing, Project Scoping, mathematical software, Researching, linear algebra, calculus, business rules, applied mathematics, Algorithms, Communication skills, Analytical, Creative, Curious

EDUCATION

Massachusetts Institute of Technology (MITx)

MicroMasters® Program in Statistics and Data Science (Capstone pending)

Courses completed: Probability, Fundamentals of Statistics, Data Analysis, Machine Learning with Python

Universidad de San Carlos de Guatemala

Master's Degree in Industrial Management

Bachelor's Degree in Chemical Engineering

CERTIFICATIONS

- MITx: Data Analysis: Statistical Modeling and Computation in Applications
- MITx: Machine Learning with Python: from Linear Models to Deep Learning
- MITx: Fundamentals of Statistics
- MITx: Probability - The Science of Uncertainty and Data
- Google Advanced Data Analytics

WORK EXPERIENCE

Research Data Scientist

University of San Carlos of Guatemala, Mathematical Modeling Unit (UMMI/SENACIT)

Jul 2022 – Nov 2024

- Applied statistical and machine learning models to climate data, enhancing data accuracy in analyzing risk scenarios in Guatemala.
- Developed predictive models and risk maps based on extreme weather events using Python and R.
- Conducted time-series analysis and evaluated global teleconnection indices like ENSO and AMO.

Web Developer (WordPress/ Professional in Public Information Systems)

University of San Carlos of Guatemala

Sep 2018 – Present

- Manage institutional WordPress site and ensure compliance with transparency laws.
- Implemented backend automation, Docker deployments, and improved digital infrastructure.
- Designed and maintained structured tracking of information requests; standardized Excel templates and validations, reducing manual corrections and rework.
- Built repeatable data cleaning workflows (Python/Excel) to consolidate monthly reports; created dashboards for volume, SLA compliance, and request categories to support leadership decisions.
- Coordinated website content updates and ensured public datasets comply with formatting/quality guidelines.

Lecturer in Engineering and Business Programs

Universidad Regional de Guatemala

Feb 2024 – Present

- Teach Calculus I, Calculus II, Thermodynamics, Chemistry, Programming in Python, Applied Physics, Statistics and Inferential Statistics.
- Guide student projects in data analysis and real-world applications.

Adjunct Lecturer & Teaching Assistant

University of San Carlos of Guatemala

Jun 2016 – Dec 2016

- Taught General Chemistry and Biology; designed syllabi and assessments for scientific courses.

PROJECTS

- Analyzed 51 years of climate data (1971–2021), detecting a **42% increase in extreme temperature event frequency** and significant precipitation anomalies, supporting national adaptation policies.
- Processed 51-year temperature and precipitation series, analyzed ENSO/NAO teleconnections, and produced **publication-ready figures** for national climate reports.
- Summarized climate impacts on agriculture, public health, and ecosystems, recommending **seasonal forecasting integration** to improve early warning systems.
- CO2 Trend Analysis (Mauna Loa): Built linear, quadratic, and cubic regression models; achieved MAPE < 1%.
- Student Python Projects: Supervised projects including customer churn prediction and environmental monitoring.

LANGUAGES

Spanish (native), English (advanced), Italian (intermediate)

ACHIEVEMENTS

- **Ranked 15th out of 371 students** in the Faculty of Engineering (USAC) – Graduation Class (*Top 4%*).
- **5th Place in Chemistry** – Interuniversity Science Olympiad II Level, SENACYT (2012)

AVAILABILITY

Available for full-time positions in on-site, hybrid, or remote modalities, depending on the organization's needs.