

MATEO RUIZ ALVAREZ

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Nationality: Colombian

PROFESSIONAL PROFILE

Data Science professional with expertise in programming, optimization, applied machine learning, and database management. Pursuing a Master's in Artificial Intelligence at FAU, Germany.

Experienced in extracting actionable insights from complex datasets through hands-on projects in medical and engineering domains. Skilled at delivering data-driven solutions and communicating results in international environments.

Primary stack: Python, R, SQL(MySQL), NoSQL (MongoDB), Google Cloud Platform (GCP), Tableau

EDUCATION

04/2024 - Present

Master of Science in Artificial Intelligence

Friedrich Alexander Universität (FAU) | Erlangen - Nürnberg, Germany

- Relevant coursework: Pattern Recognition, Machine Learning (ML) for Time Series, Knowledge Discovery in Databases, Deep Learning, Generative Models, Advanced ML for Anomaly Detection, Advanced Data Engineering, Reinforcement Learning, Probability & Stochastic Processes
- Grade: 1.5

02/2012 - 07/2017

Bachelor of Science in Civil Engineering

National University of Colombia | Medellin, Colombia

- Relevant coursework: Statistics, Linear Algebra, Advanced Mathematics
- · Teaching Assistant: Integral Calculus, Basic Structural Design
- Grade: 4.5 (1.7 in German grading scale)

WORK EXPERIENCE

08/2025 - Present

Working Student Artificial Intelligence

Agentur Philipp GmbH - agenturphilipp.de | Dingolfing, Germany

- Development and optimization of prompts for voice bots and conversational agents and dialog-based AI systems.
- Data preparation and classification for computer vision models.
- Close collaboration with the development team on integration and automation.

10/2018 - 11/2021

Resident Engineer

SACYR: Engineering and Infrastructures - sacyr.com | Medellin, Colombia

- Managed resource allocation and project data, optimizing materials and labor for tunnel construction, resulting in a 5% reduction in production costs.
- Implemented analytical tracking and reporting to measure and improve team performance, achieving a 10% higher production rate than other teams.

08/2017 - 09/2018

Junior Geotechnical Engineer

Soil and Rock Engineering | Medellin, Colombia

- Analyzed geotechnical datasets and automated report generation with Python and Excel, accelerating reporting by 10% with enhanced data visualization.
- Designed a semi-automated system for structural design and foundation drawing generation using Python, AutoCAD, and VBA in Excel, resulting in a 30% efficiency gain.

01/2017 - 07/2017

Intern for the Engineering Team

ISAGEN: Productive Energy - isagen.com.co | Medellin, Colombia

- Developed an automated system in Python and ArcGIS for geotechnical data visualization from ISAGEN's hydropower plants, making information retrieval 20% faster.
- Automated geotechnical report generation in Excel using VBA, reducing report preparation time by 30%.

SKILLS

- Programing Languages: Python, C++, R, MATLAB.
- Big Data & Machine Learning: Python (PyTorch, TensorFlow, Keras, scikit-learn, Pandas, Numpy, Matplotlib, OpenCV, Spacy), SQL, MongoDB, GCP, Spark, RAG architectures.
- Data Science & Miscellaneous Technologies: A/B testing, ETL, Data Science Pipeline (cleansing, wrangling, visualization, modeling, interpretation), Hypothesis Testing, OOP, OOD, LLM APIs (OpenAI, Ollama), LangGraph, Excel, Git, LaTeX, Jupyter Notebooks, GitLab, PowerBI, Tableau.

ADDITIONAL INFORMATION

- Languages: Spanish (Mother Tongue), English (C1), German (A1).
- Interests: Journaling, meditation, reading, sports enthusiast, cooking traditional Colombian dishes, volunteering.

31 July 2025

Mateo Ruiz A.