Esteban Caicedo Graciano

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in LinkedIn Profile

Profile

Mathematician with solid experience in programming (Python, R, Matlab, and SQL), data analysis and processing, ETL development, Machine Learning, and statistical analysis (parametric and non-parametric). I have worked on building and optimizing predictive models, customer segmentation, and strategy personalization, utilizing advanced machine learning techniques and Google Cloud Platform (GCP) to ensure scalability and solution efficiency. My focus is on applying algorithms and numerical methods to solve complex problems and improve decision-making. I am self-taught, detail-oriented, and highly responsible, with the ability to quickly adapt to new challenges and technological environments.

Education

Jan 2024 - Present

Universidad de los Andes
Master's in Artificial Intelligence

Core Courses: Machine Learning, Deep Learning, Natural Language Processing, Reinforcement Learning, Computer Vision, Knowledge Representation and Semantic Web, Embedded Systems, and Control Theory.

2017 - May 2022

Pontificia Universidad Javeriana
Bachelor's in Mathematics (Badge)
Emphasis on Statistics and Programming (Python, R, and Matlab)

Core Courses: Statistical Learning and Machine Learning, Microeconomics, Computational Mathematics, Advanced Linear Algebra, Abstract Algebra, Real and Complex Analysis, Topology, Number Theory, Statistics and Probability, Differential Equations, Probability and Stochastic Processes, Numerical Analysis, Non-parametric Statistics.

May - Sept. 2021

Correlation One
Data Science For All (DS4A)
Graduated with honors. (Badge)
13-week program on Data Analysis, Data Architecture, Machine Learning, and Artificial Intelligence using Python, SQL, and AWS, taught by professors from top universities such as Harvard, Princeton, Columbia, and MIT.

Final Project: *Estimation using Machine Learning methods of tax revenue and stamp demand in the liquor market for the Antioquia government.*

Professional Experience

Jan. 2024 - Present

VML
Data Scientist
Building, deploying, and optimizing Machine Learning and Deep Learning models with advanced approaches in prediction, customer segmentation, classification, and strategy personalization in the retail sector. Developing and deploying models using cloud platforms like Google Cloud Platform (GCP), ensuring scalability and efficient integration with business applications. Solid experience in developing natural language processing (NLP) applications and language models (LLM) applied to conversational agents, chatbots, and sentiment analysis, enhancing customer interaction and experience through automated, intelligent solutions. Developing, managing, and optimizing ETL processes to ensure data quality and integrity for models, using tools like Python and SQL for automation and data flow improvement. Extensive expertise in building dashboards and monitoring tools using Power BI, Django, and Shiny, facilitating the monitoring and analysis of key business KPIs.

Feb. 2023 - Dec. 2023	VMLY&R COMMERCE **Data Scientist** Developing and optimizing machine learning models focused on prediction, customer segmentation, and classification for the retail and advertising sectors. Implementing customized solutions that improve decision-making and increase commercial impact using Python, R, and platforms like Knime. Managing ETL processes to ensure data quality and automation with Python and SQL to handle large data volumes. Creating interactive dashboards with Power BI, Django, and Shiny, integrating real-time analysis to facilitate data-driven decisions.
Sept. - Dec. 2022	PARIS SCHOOL OF ECONOMICS **Research Assistant** Processing and analyzing time series data from Eurozone countries, Japan, and the United States for developing Machine Learning models focused on sovereign risk forecasting for the project: *Forecasting Sovereign Risk in the Euro Area via Machine Learning.*
Apr. 2021 - Jun. 2022	PONTIFICIA UNIVERSIDAD JAVERIANA **Research Assistant** Processing and analyzing databases, data mining, statistical modeling, and Machine Learning applications in Python, R, and SQL for the project: *Modeling social contact patterns in Bogotá, Colombia during the Covid-19 pandemic.*
2021 - May 2022	DEPARTMENT OF MATHEMATICS - PONTIFICIA UNIVERSIDAD JAVERIANA **Academic Tutor** Assisting students with questions in Linear Algebra, Differential Calculus, Integral Calculus, Vector Calculus, Probability, Inferential Statistics, Differential Equations, Discrete Mathematics.

CERTIFICATIONS

Jan. 2025	DEEPLEARNING.AI **Natural Language Processing Specialization** (Certificate) Comprehensive training in natural language processing (NLP) using both classical machine learning techniques and deep learning. The program includes practical skills to design applications for sentiment analysis, machine translation, text summarization, and question-answering systems. It covers classification and vector space models, probabilistic models, sequential models, and attention-based models, including transformers. Practical skills were developed using frameworks such as TensorFlow and PyTorch to implement and train advanced NLP models. This course was taught by Younes Bensouda Mourri (Stanford University) and Łukasz Kaiser (Google). The program provided both theoretical and practical knowledge to build NLP systems that lead the transformation toward an AI-powered future.
Oct. 2024	STANFORD UNIVERSITY & DEEPLEARNING.AI **Machine Learning specialization** (Certificate) Comprehensive training in machine learning fundamentals, including supervised learning techniques (linear regression, logistic regression, neural networks, decision trees) and unsupervised learning (clustering, dimensionality reduction, anomaly detection). Practical skills in Python libraries such as NumPy, scikit-learn, and TensorFlow to build and train models. Application of best practices in AI development, model optimization, and recommender system construction. Taught by Andrew Ng, a global leader in artificial intelligence.
Nov. 2022	IBM **Django Application Development with SQL and Databases** (Certificate) (Badge) Introduction to fundamental database concepts. Learning SQL fundamentals and cloud databases. How object-relational mapping (ORM) allows using object-oriented programming (OOP) languages to interact with databases. Full-stack Django skills were acquired by creating a Django web application to process and present data, along with deploying the application in the cloud.

PROFESSIONAL SKILLS

Languages	**Technical Skills**
- Spanish (Native)	*Programming, Data Processing, Statistics, Machine Learning, and Visualization*:
- English (B2)	- (Advanced) R, Python, Matlab, Power BI.
- French (B1)	- (Intermediate) SQL, Knime, Excel.
	Other Software: Git, LaTeX