# ANDRÉS VIRGÜEZ

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Location: Barcelona, Spain

## PROFILE

Senior Data Scientist with over 10 years of experience designing and deploying data-driven solutions across energy, healthcare, B2B services, and finance. Brings a unique blend of machine learning and AI expertise, data visualization, and economic insight to build intelligent, scalable software systems and business solutions. Proven ability to lead cross-functional teams and manage end-to-end ML-driven software projects. Passionate about translating complex data into actionable solutions that enhance product performance and align with core business goals.

## EXPERIENCE

**Senior Data Scientist and Team Leader**                                        Oct 2024 – Present | Barcelona
BLD.AI (Consulting for BP)
Led the final phase of a pricing software project for a global client. Developed ML and statistical modules including clustering, forecasting, and A/B testing. Directed a cross-functional team to ensure a robust and effective deployment aligned with the business needs
- Increased the average monthly onboarding rate (conversion of spreadsheets into core system objects), streamlining the item registration process.
- Built a custom clustering algorithm that improved price correlation accuracy in 80% of the cases in comparison with the software standard approach.

**Senior Full Stack Data Scientist**                                        Oct 2022 – Oct 2024 | Barcelona
Sales and Marketing – Ricoh
Designed end-to-end data analytics tools for sales planning, performance tracking, and strategic decision-making. Developed predictive models and integrated dashboards into the Sales Intelligence System, focusing on automation and insight delivery.
- Enhanced the sales reporting framework by embedding AI-driven, context-aware highlights, enabling faster, more informed decisions by commercial stakeholders.
- Delivered deep-dive insights that drove new sales strategies, such as optimizing sales rep actions (calls vs. visits) based on client portfolio segmentation.

**Data Scientist**                                        Aug 2020 – Sep 2021 | Bogotá
Financial Area – Superintendencia Nacional de Salud
Applied ML and statistical analysis to address financial challenges including forecasting, tariff evaluation, and stakeholder segmentation. Simulated revenue and collection trends across economic scenarios and designed dashboards for policy-making support.
- Developed ML models to forecast collections under various tariff schemes, improving financial planning accuracy and resource allocation.
- Created interactive dashboards in Power BI, uncovering trends in financial data and enhancing decision-making across departments.
- Designed a new tariff scheme combining economics and ML, resulting in a 50%+ increase in revenue from control levies.

**Data Scientist – Team Leader**                                        Aug 2017 – Feb 2020 | Bogotá
Collection Management – Secretaría Distrital de Movilidad
Led analytics for collection management services. Designed data pipelines, performance KPIs, and machine learning tools to predict risk and enhance budget allocation. Played a key role in modernizing and scaling operational processes.
- Improved six major operational workflows (covering 90% of the department) by introducing a rule-based clustering system for legal case classification.

- Created an ML model to assess default risk and optimize intervention strategies, helping allocate limited resources more effectively and reduce revenue leakage.


Economist                                                                      Jan 2016 – Dec 2017 | Bogotá
GEIH Survey – DANE
Analyzed city-level labor market trends and published monthly statistical bulletins. Retrieved and managed data using SQL and developed reports and presentations to support policymaking and public dissemination.
- Proposed two national labor market reports—one on ethnic minorities and one on older populations—filling critical data gaps in national statistics.
- Optimized SQL queries used to retrieve labor and social indicators, significantly reducing processing time and improving data responsiveness for stakeholders.

Other work experiences: Projects developer (1 year), Graduate Research Assistant (2 years) and Market Analysis (1 year)


## EDUCATION

M.S in Data Science                                                                                    2021-2022
Barcelona School of Economics, Barcelona, Spain

Postgraduate Studies in Statistics                                                                     2016-2017
Universidad Nacional de Colombia, Bogotá, Colombia

Economics                                                                                              2008-2012
Universidad Militar Nueva Granada, Bogotá, Colombia


## SKILLS

Backend development:                         Python, Django
Machine learning and AI frameworks:          Scikit-learn, TensorFlow, LangChain, Keras, XGBooost
Cloud computing:                             AWS (Lambda, Athena, Dynamo, Glue)
Statistical Software:                        R, SAS, Stata
Visualization/Reporting Tools:               Power BI, Tableau
Other Skills:                                GIT, Agile Methodologies