

DANIEL ALFONSO SILVA BARRERA

Head of Analytical Strategy | AI Development & Implementation | Data & AI

Product Manager | Data & Analytics Project Manager



Professional Profile _

Leader in Analytics, Data Science, and Artificial Intelligence, with a strategic focus on both the organization and the end client. Experienced in the management and development of multidisciplinary teams for the implementation of data-driven business solutions, generating value in business decision-making.

Specialized in the execution of multicultural projects (United States, Colombia, Chile, Argentina, Peru, Panama, India) using agile methodologies focused on solving functional needs, ensuring efficiency and adaptability in complex environments across diverse industries including banking, energy, and consumer goods, among others.

Strong knowledge in **Artificial Intelligence (GenAI and traditional)**, integrating **machine learning** models for the prediction and optimization of strategic processes.

Extensive academic and professional background in **descriptive, predictive, and prescriptive analytics**, with an emphasis on **Cloud Solutions, Python, PySpark, and SQL**; committed to excellence, continuous self-learning, and leadership to drive business growth and competitiveness.



Profesional Experience _

BANESCO PANAMÁ. Panamá City (PA)

Head of Artificial Intelligence. sep. 2024 – dec. 2025



- **Identified and deployed high-impact Artificial Intelligence and Machine Learning initiatives** within various vice presidencies to drive information management, improve user experience, and enable synthesis, analysis, and data-driven decision-making.
- Led the data science, machine learning, and artificial intelligence team in the implementation of advanced solutions (5 team members, including direct and outsourced personnel). **Accountable for multidisciplinary project teams:** Data Engineers, Architects, and others.
- **Serve as Product Owner** for outsourced projects, responsible for partner and vendor relationships.
- Oversaw the development and maintenance of predictive models by **implementing Machine Learning models** for forecasting market trends, financial risks, and customer behavior patterns.
- **Developed and tailored AI solutions tailored to the needs of different business areas:** operational processes, customer service processes, and digital transformation products.
- **Drove innovation and continuous improvement** within the area, driven by knowledge of AI and customer experience trends and best practices.
- Presented strategic proposals and project status reports to executive management, communicating the business value and ROI of ML/AI initiatives.



Main Contributions:

- ✓ Defined and developed the strategic methodology for the implementation of machine learning and artificial intelligence projects (in-house or outsourced).
- ✓ **Participated in the creation and implementation of the ML/AI governance policy**, considering technical, legal, and ethical aspects.
- ✓ Defined and implemented the training and communication strategy for Generative Artificial Intelligence according to the profiles and seniority of all bank employees.
- ✓ Implemented IT solutions incorporating artificial intelligence models, ensuring efficiency and accuracy in alignment with corporate objectives.
- ✓ Improved user experience through projects developed jointly with business areas, presenting proposals and progress to C-level executives.
- ✓ Provided strategic leadership and assertive team management by assigning challenges aligned with each member's talent; promoting research and innovation in techniques and methodologies.

ACCENTURE. Bogotá (COL)

Data Engineer, Management & Governance Sr. Analyst. oct. 2021 - jul. 2024



- **Designed and implemented machine learning and artificial intelligence solutions tailored to specific client needs**, optimizing information processing and storage.
- Developed and defined analytical roadmaps focused on marketing for the prioritization and implementation of **specific projects in companies within the financial, retail, and CPG sectors. (CPG = Consumer Packaged Goods)**
- **Applied advanced data analysis and Machine Learning techniques** to generate actionable insights that enhance client strategy.



Contact _



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Strengths _

- ▶ Driving digital transformation projects with direct impact on business processes
- ▶ Demonstrated experience in implementing Artificial Intelligence, advanced analytics, and data science projects for end clients
- ▶ Designing and optimizing AI and Machine Learning models across various business environments
- ▶ Proficient in Data Science for scaling solutions and improving data processing throughput
- ▶ Strong communication skills applied in interactions with teams, clients, stakeholders, and executive management
- ▶ Cross-industry experience: banking, energy, consumer goods, and more
- ▶ Directly supporting the management of business strategy projects by offering technical insights in data and data governance
- ▶ Technology background characterized by continuous learning of technological and market trends

- Cross-departmental collaboration and coordination with business and client teams to ensure data solutions align with the client's business and operational objectives.
- **Leadership in internal R&D+i initiatives** to explore and implement new trends and technologies in data science, machine learning, and artificial intelligence.
- **Key Clients:** Banco Galicia, Nutresa, Grupo Éxito, Avianca, Caterpillar, Econova (Ecopetrol), Canal Caracol.

Main Projects Managed:

- **Nutresa:** Led the implementation of tools and analyses based on machine learning and artificial intelligence to understand the customer and their consumption habits, in order to define data-driven marketing strategies.
- **Econova (Ecopetrol):** Led the design and development of a pipeline to extract and process natural language from social media, along with the implementation of a dashboard to monitor the performance of Econova's launch campaign, Ecopetrol's new open innovation network.
- **Internal R&D+i Unit:** Directed the development of a website and a content recommendation engine based on AWS technologies, strengthening the company's online presence through the application of effective technological solutions.
- **Caterpillar:** Led the implementation of the process for extracting and consolidating data from Google Analytics through BigQuery, improving the accessibility and usability of data for strategic decisions.
- **Avianca:** Played a key role assuming Data Engineer and Data Scientist functions in the implementation of recommendation models based on artificial intelligence.

Education_



Xaverian Pontifical University

MSc in Industrial Engineering. 2012 - 2014

B. Eng. In Systems Engineer. 2005 - 2010

Certifications_



AWS Cloud Practitioner

Professional Development_

- AI Product Management Specialization, Coursera, 2024
- Machine Learning Engineering for Production – MLOps, Coursera, 2022
- Information Visualization, Coursera, 2021

Languages_

Spanish



native

English



B2

Usual working language for projects involving the USA and India

Data science and cloud computing tools_

applied in led projects

- Machine Learning, Artificial Intelligence, Generative Artificial Intelligence
- Python
- SQL
- PySpark
- Tableau / Power BI
- Cloud Infrastructure (AWS, GCP, Azure)

Agile Project Management_

CRISP-DM

Scrum

Kanban

Further Information:



in/danielsilvabarrera



UNIVERSIDAD DEL ROSARIO. Bogotá (COL)



Academic Analytics and Information Specialist. jan. 2017 – aug. 2021

- **Data Lead in the Academic Directorate, strategically guiding initiatives for the management, exploitation, and analysis** of information aimed at educational management, ensuring accessibility and accuracy in data handling.
- **Definition of key performance indicators (KPIs)** to measure the effectiveness and efficiency of cross-functional processes.
- Responsible for the definition, vendor selection, and implementation of information systems to centralize and facilitate data analysis, aiming for data-driven academic management.
- **Definition and development of the data architecture** to generate indicators and analytical models in university processes and drive institutional strategies.
- **Preparation of reports applying data storytelling** and integrating detailed reports and advanced visualizations to optimize strategic decision-making.

Main Contributions:

- ✓ **Served as Product Owner** and project lead for the development of a platform to manage the program lifecycle, enhancing information accuracy and enabling data mining analysis for more efficient operations.
- ✓ **Designed and deployed dashboards for 10 processes** across two directorates within the Academic Directorate, facilitating informed decisions through effective visualization of key data.
- ✓ Ensured the fulfillment of performance, quality, and productivity indicators for various academic processes through data analysis tools.
- ✓ **Provided decision-making support through automated market analyses**, applying techniques such as web scraping and data storytelling to extract key insights and optimize academic programs, policies, and strategies.

INFÓRMESE SPSS ANDINO. Bogotá (COL)



Product Specialist IBM SPSS. mar. 2015 - dic. 2016

- Led the design and drove the sale of over 50 analytical proposals across various sectors, generating \$10 million annual revenue for the company.
- I led the creation and dissemination of courses, workshops, seminars, among others, on advanced analytics.

EVERIS. Bogotá (COL)



Junior Consultant. may. 2011 – mar. 2013

- Participated in the implementation of information systems in organizations such as UGPP, Pacific Rubiales Energy, and Allianz. **This included** improving operability, managing multiple areas, and handling large volumes of data to optimize organizational efficiency.

Experience as a Research Project Assistant _

- **PI2E Project, Xaverian Pontifical University,** Bogotá, apr. 2013 - nov. 2014
- **Vive Digital 2 Project,** National University of Colombia, Bogotá, nov. 2013 - feb. 2014