

Juan Pablo Naranjo Cuéllar

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EDUCATION

Carnegie Mellon University

Master of Computational Data Science

Pittsburgh, PA

December 2026

Relevant coursework: Foundations of Computational Data Science, Advanced NLP, AI Engineering, Machine Learning

Universidad de los Andes

B. Sc. in Electronics Engineering

Bogotá DC, Colombia

October 2022

B. Sc. in Electrical Engineering

October 2022

Relevant coursework: Intelligent Analysis of Signals and Systems, Stochastic Processes, Optimization

SKILLS

Programming Languages: Advanced - Python, SQL

Software: NumPy, Pandas, Matplotlib, Seaborn, Altair, PyTorch, Scikit-learn

Computing Environments: Windows, Linux, Mac, Arduino, Raspberry Pi

Languages: Fluent – English; Native Speaker – Spanish

PROFESSIONAL EXPERIENCE

Ernst and Young (EY) Colombia

Technology Consulting Staff

Bogotá DC, Colombia

September 2022 – July 2025

- Developed and deployed machine learning-driven solutions using Python, utilizing the PyTorch framework to enrich client decision-making through sentiment and psychographic analysis of audio data from over 400 users, delivering comprehensive, data-driven reports.
- Operated and maintained relational databases built on MS SQL Server, enhancing data integrity and optimizing query performance, resulting in a 25% increase in processing speed and more reliable data access.
- Programmed Robotic Process Automation bots for clients in the financial sector, utilizing Automation Anywhere 360 to automate repetitive tasks, improving operational accuracy and reducing processing times by over 40%.

TEACHING EXPERIENCE

Universidad de los Andes

Undergraduate TA – Master's level Optimization and Stochastic Processes Courses

Bogotá DC, Colombia

January 2022 – June 2022

- Provided instruction and support to Master's-level students in optimization and stochastic processes, holding office hours and grading assignments to improve their understanding of advanced concepts with Python and MATLAB.

PROJECTS

AnyoneAI

Financial Advisor Chatbot - Academic

Wilmington, DE (Remote)

January 2025 – February 2025

- Engineered and deployed a financial advisor chatbot using LangChain, ChromaDB, and OpenAI GPT models, providing context-aware answers from over 10,000 financial documents.
- Improved retrieval accuracy by 15% and reduced query latency by approximately 20% through an optimized document indexing pipeline.

Universidad de los Andes

Real-time ML application for fault detection and classification in power systems - Academic

Bogotá DC, Colombia

January 2022 – June 2022

- Implemented a machine learning-based system for real-time fault detection in power systems on Raspberry Pi with HIL402, achieving >88% classification accuracy across multiple fault types with millisecond-level detection times.
- Published findings in academic journal: **Naranjo Cuéllar, J.P.**, Ramos López, G., and Giraldo Trujillo, L.F. "Learning the geometry of short-circuit faults in power systems for real-time fault detection and classification." IET Cyber-Physical Systems: Theory & Applications 8.4 (2023): 289–306. Web.