

# Juan Pablo Naranjo Cuéllar

jpnanranjo@cmu.edu | (770)815-1212 | www.linkedin.com/in/juanpnaranjoc

## EDUCATION

### Carnegie Mellon University

*Master of Computational Data Science*

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

Pittsburgh, PA

December 2026

### Universidad de los Andes

*B. Sc. in Electronics Engineering*

*B. Sc. in Electrical Engineering*

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

Bogotá DC, Colombia

October 2022

October 2022

## 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.