Juan José Restrepo Rosero

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PROFILE

I am a trilingual Electronics Engineer with a major in Mechatronics and a minor in Computer Science from the Javeriana University in Cali, Colombia. Highly interested in robotics, Machine Learning and automation. I am a committed, responsible, dedicated and persistent person. Great ability with numbers, teamwork and motivated to learn new things and approach challenges with positive and creative thinking.

EDUCATION

Pontificia Universidad Javeriana Cali, Department of Electronics and Computer Science. **Santiago de Cali, CO**
Master's degree in data science, July 2024 - In Progress

Department of Electronics and Computer Science.
Bachelor of Science in Electronics Engineering, January 2019 -April 2024
Cumulative GPA: 3.69/4.00

Southern Lee High School **Sanford, NC, USA**
Foreign Exchange Student,High School Diploma, August 2017 - June 2018
Cumulative GPA: 3.70/4.00

San Antonio María Claret **Santiago de Cali, CO**
High School Student, September 2011 - June 2017
Cumulative GPA: 3.80/4.00

SKILLS

Laboratory: Diodes, Transistors, Capacitors, Inductors, Resistors, Sensors, Integrated Circuits, Microcontrollers, PLC, Oscilloscope.
Programming & Data Engineering: C/C++, R, Python, Java, MATLAB-Simulink, Jupyter/Colab, SQL (PostgreSQL, SQLite3), Apache Airflow, Docker, dbt, ETL/ELT pipelines, Git, Linux.
Data Analytics & Tools: Machine Learning (pandas, NumPy, scikit-learn), Data modeling, Grafana, Neo4j, UiPath, NI Multisim, SolidWorks, Ladder PLC, Microsoft Office.

Languages:

Spanish: Native English: Advanced/Native (C1) German: Intermediate (B1) French: Basic (A2)

PROFESSIONAL EXPERIENCE

Pontificia Universidad Javeriana Cali, **Laboratory Practices Monitor/Assistant:** August 2022 - December 2022

- My duties consisted of assisting students during the design, simulation, assembly and testing of electronic circuits composed of resistors, capacitors, diodes and transistors. Subject: Physics of Electronic Devices.

Holcim ABS - Electronic Engineering Intern: July 2023 - January 2024

- Intern in the RPA area. My functions consisted of the analysis, development and deployment of Automations in RPA using VBA Excel Macros and Scripts in the Google Apps Scripts - JavaScript suite.

PROJECTS

Knowledge Management & Multi-Spectroscopy Data Pipeline (Raman, FTIR, UV-Vis): May 2025 – In Progress

- Developing a full ETL/ELT pipeline for spectroscopy data (Raman, FTIR, UV-Vis, and others) using Airflow, PostgreSQL, and Python, following a Medallion Architecture (Bronze, Silver, Gold) to extract, clean, transform, and model experimental data. The project consolidates tacit knowledge and dispersed research data from multiple techniques, applies data engineering to detect patterns and trends, and generates analytical outputs to support research decision-making and services for the scientific community.

Qversity Data Engineering Technical Project: June 2025 – July 2025

- Developed a complete ELT pipeline using **Apache Airflow** for orchestration, **dbt** for transformations, and **PostgreSQL** as the data warehouse, implementing *Bronze, Silver, and Gold* layers to extract, clean, transform, and model data from AWS S3, while leveraging Docker to streamline environment setup and pipeline deployment. Delivered **21 actionable business insights** including ARPU by plan, revenue by geography, customer segmentation, and payment behavior, ensuring data quality through tests and handling real-world data anomalies.

Flexible Manufacturing Cell Control & Traceability System: July 2022 – January 2024

- Designed and implemented a graph-oriented database system with a visualization dashboard to monitor and trace manufacturing cell processes, improving operational oversight, decision-making, and traceability.

Football Match Outcome Predictor: November 2022 – April 2024

- Developed a predictive analytics application in Python to forecast outcomes of the 2022 FIFA World Cup, Euro, and Copa América 2024 by performing web scraping, data preprocessing, and modeling, achieving accurate match predictions.

Google Suite Chatbot for Process Optimization: August 2023 – December 2023

- Implemented an intelligent Chatbot within Google Suite to enable employees to quickly access documentation, reports, and critical information through keyword queries, enhancing operational efficiency and knowledge management.

Chelsea Challenge 2023: June 2023 - June 2023

- For two weeks, together with the Pontificia Universidad Javeriana Cali, Brunel University London, Pontificia Universidad Javeriana Bogotá, Design Factory London and Design Factory Javeriana Bogotá and Cali, we worked to provide attractive and innovative solutions applying the Design Thinking methodology to increase participation Fan Engagement and ROI around the 2023 FIFA Women's World Cup.

Professional Integration Project (PIP) – Norgas: February 2020 - December 2022

- Developed a monitoring system to measure LPG cylinder levels, providing real-time insights to users and the company, optimizing logistics, and improving customer satisfaction.

Control Strategy Design and Evaluation: September 2022 - November 2022

- Engineered and evaluated Cascade, Feedforward, and Feedback control strategies for a Drinking Water Treatment Plant using MATLAB-Simulink, maintaining precise chlorine levels and improving water quality management.

REFERENCES

Carol Villar
Director Network Engineering
Claro Enterprise Solutions
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