

# María Alejandra Boada Rodriguez

## Software Engineer & Psychologist

Niagara Falls, ON (L2G4N9) | (+1) 4372135624 | mboadarodriguez7@gmail.com  
[Portfolio](#) - [LinkedIn](#) - [GitHub](#)

Multidisciplinary professional with experience in software development, technical support, data analytics, and remote work environments. Strong background in system configuration, application testing, documentation, and cross-functional collaboration. Currently pursuing a Master's in Data Analytics in Canada, with advanced training in software engineering, cybersecurity, and cloud-based deployments.

### SKILLS

#### Technical & Support Skills

- Software installation & configuration
- Application testing & troubleshooting
- Documentation & reporting
- Remote collaboration tools
- Agile / Scrum environments

#### Programming & Tools

- Python, JavaScript, C#, PHP
- React, Laravel, Flask

- SQL (MySQL, PostgreSQL)
- Git, Jira, Postman, Docker (basic)

#### Systems & Data

- Data analysis & validation
- API testing
- Cloud deployment (AWS – basic)

#### Languages

- Spanish (Native)
- English (Advanced)

### EXPERIENCE

#### BASEP SAS | Jan 2024 - Aug 2025 | Software Development

Cali, Valle del Cauca - Colombia

- Executed application and system testing for business analytics solutions, validating data integrity and documenting test results to ensure reliability and compliance with requirements.
- Installed, configured, and validated backend services and APIs prior to deployment, performing functional checks and troubleshooting using tools such as Postman.
- Supported cloud-based deployments by assisting with Docker containerization, AWS configuration, and basic system performance monitoring in production environments.
- Provided clear technical documentation and monthly progress reports for stakeholders and non-technical users, ensuring traceability of changes, issues, and improvements.
- Collaborated remotely with cross-functional teams, supporting system monitoring, issue tracking, and communication throughout the software lifecycle.

#### Gobernación del Valle del Cauca | Jul 2020 – Aug. 2025 | Psychologist

Cali, Valle del Cauca - Colombia

- Supported the planning, execution, and evaluation of the plans, programs, and projects of the Secretariat of Territorial Peace and Reconciliation, ensuring compliance with objectives, timelines, and institutional standards.
- Coordinated the technical and operational monitoring of interinstitutional projects, preparing progress reports, risk matrices, and improvement plans to strengthen decision-making processes.
- Managed the coordination with internal and external stakeholders to ensure the effective implementation of territorial initiatives, including the definition of deliverables, quality control, and supervision of contractual compliance.

#### Secretaría General de la Alcaldía Mayor de Bogotá D. C. | Oct 2016 – Jul 2020 | Psychologist

Bogotá, Cundinamarca – Colombia

- Led Performance Evaluation and Labor Management projects, applying organizational analysis tools and monitoring methodologies to identify improvement opportunities, promote ethical practices, and strengthen the quality of public service delivery.
- Managed the implementation of the institutional Telework project, coordinating the deployment, adoption, and monitoring of the modality through indicator analysis, operational risk assessment, and the promotion of ethical best practices in digital work environments.
- Directed initiatives for youth employment and entrepreneurship promotion, managing agreements with educational institutions and developing academic–labor integration projects focused on ethical training, skills development, and the creation of professional opportunities for students.

# PROJECTS

## La Liga Data Analytics & Hybrid Quantum-Classical Modeling | Nov 2025

- Designed and automated a complete data pipeline to extract LaLiga match data from the API-Football REST API, perform data cleaning, feature engineering, and exploratory data analysis to generate actionable insights on team performance.
- Built and evaluated predictive models for match outcome classification (home win, draw, away win) using both classical Machine Learning (Random Forest) and a hybrid quantum-classical model with QNN feature embedding implemented in PennyLane.
- Developed advanced visual analytics—including correlation heatmaps, class distributions, and confusion matrices—to interpret predictive patterns and assess model behavior across classical and quantum-enhanced workflows.

**Tech Stack:** Python, Pandas, NumPy, Scikit-Learn, Matplotlib, Seaborn, PennyLane, Quantum Machine Learning (QNN), REST APIs

**GitHub Link:** <https://github.com/MariaAlejandraBoadaRodriguez/laliga>

## Quantum Portfolio Optimization | Aug 2025

- Developed a portfolio optimization platform using a QUBO (Quadratic Unconstrained Binary Optimization) formulation to balance risk and return.
- Implemented preselection strategies (Sharpe ratio, high-return, low-volatility, and correlation filters) to reduce problem complexity and enhance diversification.
- Built a simulated annealing solver and integrated quantum-inspired methods, with the potential to scale to QAOA/PennyLane.
- Designed a professional frontend to present results, including asset weights, USD allocation, expected annual return, volatility, and the QUBO cost.

**Tech Stack:** Python, NumPy, Pandas, PennyLane, React, GitHub Pages

**Page Link:** <https://investmen-portafolio.vercel.app/>

**GitHub Link:** <https://github.com/MariaAlejandraBoadaRodriguez/investmen-portafolio.git>

## Teleportation | Feb 2025

- Developed an interactive web platform to simulate quantum teleportation using Flask and PennyLane.
- Designed an intuitive interface to input quantum parameters and visualize the state transmission results.
- Integrated a quantum backend to process teleportation logic based on entanglement and measurement outcomes.

**Tech Stack:** Python, Flask, PennyLane, HTML, CSS, JavaScript, Render

**Page Link:** <https://teleportation-project.onrender.com/>

**GitHub Link:** [https://github.com/MariaAlejandraBoadaRodriguez/teleportation\\_project](https://github.com/MariaAlejandraBoadaRodriguez/teleportation_project)

# EDUCATION

**University of Niagara Falls Canada – UNF** - Master of Data Analytics. Sep, 2025 – May, 2027

**Universidad Iberoamericana** - Software Engineering. Jun, 2022 – Jun, 2026

**Escuela Superior de Guerra** - Master in Cybersecurity and Cyberdefense. Jun, 2024 – May, 2026

**Universidad de los Andes** - Student Post-Quantum Cryptography Course. Aug, 2024 - Dec 2024

**Universidad de los Andes** - Introduction to Quantum Computing Course. Jun, 2024 - Jun, 2024

**SENA** - Software Programming Technician. Sep, 2020 - Feb, 2023

**Corporación Universitaria Minuto de Dios** - Psychologist. Aug, 2011 - Dec, 2015

# CERTIFICATIONS

[Software Engineer Certificate](#) - HackerRank. Nov, 2025

[Variational Algorithm Design](#) - IBM. Aug. 2024

[Basics of Quantum Information](#) - IBM. Dec, 2024

[Introduction to Cybersecurity](#) - CISCO. Apr, 2023