MARIANA ARBOLEDA

As an educator and researcher, I integrate data science, computational thinking, and equitable education to create meaningful learning experiences. I have led initiatives to help teachers incorporate data literacy and developed data-driven processes to evaluate multiple educational projects. My classroom experience enriches my data analysis work just as much as my involvement in projects enhances the relevance and impact of my teaching.

🎓 EDUCATION

PhD., Education Universidad del Norte 📍 Barranquilla, Colombia

current | 2022

- Data Science Education
- Advisor: Camilo Vieira, PhD

Visiting Scholar University of Virginia 📍 Charlottesville, USA

June 2025 | Aug 2024

- Fulbright scholar
- Advisor: Jennifer Chiu, PhD

MS Engineering Universidad EAFIT 📍 Medellín, Colombia

2022 | 2019

- Applying Machine Learning Models in sales forecasting
- GPA: 4.78/5.0

BS Production Engineering Universidad EAFIT 📍 Medellín, Colombia

2016 | 2012

- GPA: 4.64/5.0

📈 SELECTED PROJECTS

Research assistant Barranquilla, Colombia 📍 Universidad del Norte

present | 2022

- Validating psychometric instruments for measuring Teacher well-being and socio-emotional learning of students from two different countries, and leading the report of quantitative results.

Pedagogical coordinator and instructional developer Barranquilla, Colombia 📍 Universidad del Norte

2024

- Coordinated a team of 5 experts to design 30 lesson plans and evaluations for the K-11 Colombian curriculum
- Designed lesson plans introducing computational science, and data science, and artificial intelligence concepts through unplugged and technology-based activities

Leading Data Analyst Barranquilla, Colombia 📍 Universidad del Norte

2023 | 2020

- Developed an innovative online visualization platform enabling seamless customization and download of charts, facilitating efficient data-driven analyses for the team.
- Led a team of data analysts to collect, clean, and analyze program data, ensuring data accuracy and integrity for evidence-based decision-making.
- Collaborated closely with other leaders and stakeholders, leveraging data insights to identify areas for improvement.
- Pioneered the implementation of an automated evaluation process for a computational thinking maturity model.

CONTACT

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 github.com/marianaarboleda

🔗 marianaarboleda.github.io

in https://www.linkedin.com/in/marianaarboledaf/

LANGUAGE SKILLS

R
Python
Bash
SQL

🗂 SELECTED TEACHING EXPERIENCE

Dec 2023 | Jan 2023

Mathematics Tutoring — Universidad del Norte - I.E El Cañahuate — 📍 Barranquilla, Colombia

- Providing tailored mathematics tutoring sessions to high school students, with a strong emphasis on statistics, probability, and data visualization
- Instilling an appreciation for Mathematics and its practical applications, with a focus on real-world examples and relevance
- Utilizing various teaching resources to enhance comprehension of statistical concepts and data representation while recognizing the environmental limitations

Dec 2023 | Jul 2022

Computational Thinking for Everyone — Universidad del Norte — 📍 Barranquilla, Colombia

- Teaching Computational Thinking, Data Science, and Machine Learning fundamentals for multidisciplinary students
- Implementing a design-based research approach to refine the program using evidence from the initial offerings

Nov 2021 | Apr 2021

Computational Thinking for High School Level Students - Remote Learning — Universidad EAFIT — 📍 Medellín, Colombia

- Engaged students in beginner-friendly activities fostering the development of computational thinking skills
- Encouraged collaborative learning through online platforms, creating an interactive and inclusive virtual classroom

🎖 SELECTED AWARDS, FELLOWSHIPS, & GRANTS

2025 | 2024

Fulbright scholarship - Estudiante doctoral colombiano — Fulbright Colombia — 📍 Colombia

N/A

2022 | 2019

Full-Funded Research Project in Engineering — Universidad EAFIT — 📍 Colombia

- Master's program research

2016 | 2012

Bachilleres por Colombia Scholarship — Ecopetrol — 📍 Colombia

- Full scholarship for the entire undergraduate program

2015

Roberto Rocca Education Program Scholarship — Ternium, Techint Ingeniería y Construcción and TenarisTamsa — 📍 Colombia

N/A

2014

Honorary scholarship for academic performance — Universidad EAFIT — 📍 Colombia

N/A