

WILLIAM ANDRÉS GÓMEZ ROA

Bioengineer and Data Scientist

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EDUCATION

Biomedical Engineering

Universidad de los Andes

2014- INCOMPLETE Bogotá D.C.

- Quantitative Physiology
- Classical Physics
- Differential Calculus
- Organic Chemistry

Bioengineering (Specializing in Biomedical Engineering)

Pontificia Universidad Javeriana

2020-2024 Bogotá D.C.

- Analog Electronics
- Advanced Programming
- Dynamic Systems Control
- Fundamentals of Nanotechnology
- Bioinformatics

Data Science (Emphasis in Mathematics)

Pontificia Universidad Javeriana

2021 - Expected 2026 Bogotá D.C.

- Linear Regression
- Data Visualization
- Inferential Statistics
- Machine Learning
- Multivariate Analysis
- Data Governance and Legislation
- Artificial Intelligence

PROJECTS

Project 1

Bioengineering Thesis

- Adapts an experimental visual control system for human experiments.
- Analyzes the interaction between the human visual system and an artificial optical system with biocontrol to regulate accommodation in response to visual stress caused by digital screens.
- Acquires electromyographic signals, infrared images of the pupil, and optical power measurements of electronic lenses Optotune, adapting an experimental setup for human trials.

MY LIFE PHILOSOPHY

"The greatest personal growth happens when we face our difficulties, not when we avoid them."

MOST PROUD OF



My Careers

I have a great passion for data science, engineering, and all aspects of life in its various scales of beauty.



Speaking British English

At 18, I went on a cultural exchange to England, where I obtained the IELTS B2 certification (2017).



Passion for Learning and Love for Animals and Nature

I have always been fond of animals, nature, and medicine. I'm excited to study and learn more about these fields every day.

STRENGTHS

Deep Learning

Big Data

GitHub Management

Mathematical Analysis

Researching Scientific Articles

Exploratory Data Analysis

Descriptive and Inferential Statistical Analysis

Hard Worker

Teamwork

Linux Management

Python

R

LaTeX

C++

Java

Matlab

Octave

LabVIEW

Julia

Maple

Power BI

SQL

Linux

Prolog

Arduino

Microcontrollers

ROS - Robotics

Databases

Microsoft Office

LANGUAGES

Spanish



English



- Writes an application in LabVIEW, leveraging Python for signal acquisition via a commercial API, controlling electronic lenses from Optotune, and capturing and storing data from different individuals.
- Implements computer vision algorithms to segment the pupil in infrared eye images and determine its diameter.
- Follows IEC62471 safety standards to protect the eyes from infrared light devices.
- Submits the project to the Research and Ethics Committee of the Faculty of Engineering at Pontificia Universidad Javeriana.

A DAY IN MY LIFE

