

## Profile

I am a Chemist and Data Analyst from the Universidad Nacional de Colombia who leverages statistics and programming to drive advancements in industry and academia. With expertise in data science, R and Python programming, and version control using Git and GitHub, I apply analytical rigor to both scientific and personal projects.

I bring an objective, data-driven mindset to problem-solving while fostering a collaborative work environment. I thrive in teams, using data as a transformative tool to generate insights and drive impact. Through my experiences, I have strengthened my resilience and equanimity—qualities that enable me to navigate challenges and deliver results under pressure.

## Work Experience

### The princeton review - Tutor.com

#### Chemistry tutor

Remote

February 2021 – Present

- Development and application of personalized communication techniques to introduce students to scientific topics, offering new perspectives and tools to excel with their academic challenges.
- Reviews available [here](#).

### Sistema General de Regalías - Universidad Nacional de Colombia

#### Research and development chemist

Bogotá

February 2022 - April 2022

- Use of data visualization in R to effectively communicate results of phenolic compounds extraction.
- Data-driven decision making to minimize resource use. Reproducible report available [here](#).

### Agrilab SAS

#### Research and development chemist

Bogotá

January 2021 - March 2021

- Optimization of an irrigation water cleaning methodology using Design of Experiments and Response Surface Methodology.
- Application and statistic validation in R of a new alternative silicon quantification method in fertilizers and organic matter. Reproducible report available [here](#).

### Belcorp

#### Chemical Laboratory Analyst

Tocancipá

Septiembre 2021 - Diciembre 2021

- Insight generation about emulsion composition and their stability to inform data-driven decision making using design of experiments and response surface optimization.

### University of Copenhagen

#### Pasante

Remoto

Abril 2020 - Agosto 2020

- Chemical data cleaning, structuring, validating, visualization and modeling to optimize rice husk separation process.

### Belcorp

#### Chemical trainee

Tocancipá

July 2019 - February 2020

- Waxes' thermal behavior exploration by experimentation and multivariate statistics (PCA).
- Partial least squares multivariate regression modeling.

## Education

### Google Data Analytics Professional certificate

September 2024

Coursera - Google

relevant topics: SQL, R, Data cleaning, Data visualization, Tableau, Spreadsheets, Business analysis.

### Python and Pandas for Data Engineering

February 2023

Coursera - Duke university

Relevant topics: Python, problem solving, computational logic, Big data, data structures.

### Data science: foundations using R

Julio 2022

Coursera - Johns Hopkins University

Relevant topics: data cleaning, analysis, and visualization using R, data gathering, reproducible research, using github to manage data science projects.

### Chemistry

April 2021

Universidad Nacional de Colombia

Thesis: development of a new waxes quantification method using multivariate partial least squares regression.

### Chemometrics

december 2020

Universidad Nacional de Colombia

Relevant topics: R programming, support vector machines, Random forest, Principal component analysis.

## Personal projects

### machine learning, logistic regression, continuous delivery and integration.

septiembre 2024

- creation and use of a machine learning python project scaffolding, using virtual environment, `make file`, requirements file, and test scripts.
- codespaces as virtual development environment.
- python for:
  1. Design and creation of a synthetic dataset based in business needs.
  2. Statistic evaluation of variables' distribution, data visualization.
  3. logistic regression model training using cross validation, metrics like Kolmogorov-Smirnov (KS), AUC (Area Under the ROC Curve) and Population Stability Index (PSI)
- Github Actions to constantly test ensuring continuous delivery and integration.
- this and all my other data projects available at my github: <https://github.com/afbeltranr>.

## Skills

**Statistics:** distributions evaluation, ordinary and multiple least square regression models, logistic regression, Design of experiments, response surface and desirability function optimization, hierarchical clustering methods, Principal components analysis, genetic algorithms variable selection.

**programming:** R, Python, SQL, Git, LaTeX, Spreadsheets, GCP.

**Soft:** active listening, stress management, conflict resolution, adaptability, critical thinking, empathy, efficient collaboration.