

Carlos Andrés Betancur Yepes.

Physicist: Data Scientist | Data Specialist.

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Trained scientist with strong skills in **statistical** and **computational** interpretation of industry problems, backed by my undergraduate degree in **Physics**, where I gained a foundation in analytical methods and programming, especially in **Python**. I have also completed courses in **SQL**, **Power BI**, **Power Apps** and **Power Automate** thus strengthening my skills in data analysis. As a data scientist, I have expanded my programming knowledge with a focus on libraries such as **Pandas**, **JSON**, **Numpy**, **Matplotlib**, **Seaborn**, **NLTK**, etc. In the field of **Machine Learning**, I have applied **Azure services**, **Scikit-Learn**, and **natural language processing** models using **Transformers**, including the integration of the **Chat GPT API**. I also have experience in **Deep Learning** tools like **Tensorflow** and **Pytorch**, along with web development skills using **Flask**, **Streamlit**, **HTML**, **CSS**, and **JavaScript** to deploy models in production. I stand out for my ability to learn quickly, **collaborate efficiently in teams**, and ensure effective deliveries. I am committed to excellence and continuous improvement, seeking opportunities to apply my **analytical skills** and contribute to the **success of the team and organization**.

EXPERIENCE

Data Scientist at ManpowerGroup Colombia (December 2023 - Present)

- I spearheaded the implementation and optimization of an **Azure AI Search** service for intelligent document management. I developed an innovative user interface using **Python**, **HTML**, and **CSS**, significantly enhancing efficiency in information retrieval. This project underscored my ability to tackle complex challenges and deliver effective solutions in **artificial intelligence** and data management, positioning the organization at the forefront of technological innovation.
- I developed a customer experience comment **classification model**, where I implemented a **bagging-type** model using **machine learning** algorithms. Additionally, the **ChatGPT API** was utilized to enhance accuracy in categorizing comments into various categories. This project achieved a significant improvement in the efficiency of the classification process, receiving positive feedback for enhancing the understanding of comments.
- Use of **Python** to consume **APIs** in order to extract information through **Web Scraping** techniques, utilizing the **requests** and **Beautiful Soup** libraries. Implementation of an automated process for data extraction, with

manipulation of documents in **JSON** format and unstructured text. The results are automatically incorporated into a Word file with a carefully formatted layout for easy reading by the user.

Data Analyst at ManpowerGroup Colombia (January 2023 – December 2023)

- I restructured a crucial **Power BI dashboard** for the company, focusing on operational costs and reducing the update time **from over 8 hours to just 3 minutes**. Through efficient data modeling and DAX programming, along with optimization of the **ETL** in **Power Query**, I streamlined access to key financial information, significantly enhancing the company's ability to make informed decisions regarding costs and operations.
- Development and Automation of **Power BI** dashboards integrated with tools such as **Python** and **SQL**. I also consumed **APIs** through **Power BI** using queries in M language.
- Consumption of APIs with **Python** for information extraction using **Web Scraping** techniques, **request** and **Beautiful Soup** libraries and manipulation of **JSON** format documents.
- Optimizing queries by applying advanced **Power Query** and **M language** usage for big data projects.
- Building advanced formulas in **DAX language** and designing interactive reports leveraging the various functionalities in **Power BI** visuals for **descriptive** and **predictive analytics**.

MY INDEPENDENT PROJECTS

About data mining, machine learning, and web scraping:

https://github.com/ndrsbtncr/My_Projects_ML

- In my repository, you can find projects about **natural language processing** such as **sentiment analysis** (NLTK, SpaCy, SciPy, TextBlob), **machine learning models** (Linear Regression, Decision Trees, Random Forest, Logistic Regression, Kmeans, Kprototypes), and **anomaly detection** related to cybersecurity (IsolationForest). I apply **probabilistic techniques** for device **survival analysis** and predict failure events. I've also created a Python and Selenium **Web Scraping** robot with an **executable .exe** for data extraction without using **APIs**.

MATERIALS SCIENCE RESEARCH GROUP, Universidad de Antioquia (June 2021 – December 2022)

- **Development of new theoretical studies** on optical layers of experimentally verified non-linear materials.
- **Implementation of news algorithms** for the solution of differential equations in Wolfram Mathematica language.

SKILLS.

- Python, Machine Learning, Deep Learning, C++, HTML, CSS, JavaScript, SQL, Power BI, Microsoft Excel, Mathematical and statistical modeling, Power Pivot, Power Query, M language, Data Mining, Postman, Matlab, Wolfram Mathemática, intermediate English, basic German.

EDUCATION

PROFESSION

Universidad de Antioquia

- **Physics** (2014-2022)

Achievement: I received an honor mention in the ninth semester as the physics student with the highest-grade average.

CERTIFICATIONS

Universidad de Antioquia

- Big Data (April 2022 - November 2022)

MinTic

- Fundamentals of data analytics (November 2022 – January 2023)

Udemy

- Basic, Intermediate, and Advanced Excel. (December 2022 - December2022)
- SQL Server from beginner to advanced. (January 2023 – February 2023)

- Power BI from beginner to advanced. (January 2023 – April 2023)

REFERENCES

Senior Data Scientist Michal Hemmerling

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