



Eder Arley León Gómez

Data scientist

I am an electrical engineer with a master's degree in engineering, backed by a strong foundation in mathematics, statistics, sciences, and humanities. My professional focus lies in data science, where I have developed expertise in key areas such as data analysis and processing, leveraging classical **Machine Learning** algorithms for supervised and unsupervised tasks using Python; Deep Learning model development, with applications in **Natural Language Processing** (NLP), **Image Processing**, and **Video Processing**; and the implementation of **Artificial Intelligence** solutions in both embedded systems and Cloud Computing environments. I have successfully utilized platforms like **Azure** and **AWS** to ensure efficient deployment, scalability, and optimization of these solutions. My robust mathematical and statistical skills enable me to design and rigorously validate all the applications I develop.

Academic Background

2012-2015 **Electrical Engineer**, *National University of Colombia*

Thesis: *"Impacts of squirrel cage induction generators in a power flow studies".*

2016-2019 **Master of Engineering - Electrical Engineering**, *National University of Colombia*

Thesis: *"A framework for online prediction using kernel adaptive filtering".*

Distinction: **Meritorious** for its rigorous research and development of well-founded and consistent research.

2020-Today **Doctorate in Engineering - Automatic**, *National University of Colombia*

Thesis: **Line of research:** Data science.

"Non-stationary time-series forecasting using machine learning for sustainable energy planning"

Bicentennial Doctoral Excellence Scholarship Program, Minciencias, Colombia

Courses and Certifications

Actualmente **Machine Learning Engineering**, *Platzi*

2024 **Introducing Multimodal Llama 3.2**, *Coursera*

2022 **Microsoft Devops Foundataion**, *Intelligent trainig*

2022 **AWS Cloud Practitioner**, *Platzi*

2021-2022 **Getting started with AI on Jetson Nano, Getting Started with DeepStream for Video Analytics on Jetson Nano, Building Video AI Applications at the Edge on Jetson Nano**, *Nvidia*

2021 **Time series**, *Kaggle*

Work experience

6/4/2020- **Data Science Specialist**, ARUS-GROUP SURA

Today Features:

- Chatbot Development: Designed a natural language processing framework to enhance user support in chatbots, utilizing Retrieval-Augmented Generation (RAG) methodologies.
- Object Detection and Tracking: Developed and implemented advanced models for object tracking, enabling real-time alerts and statistical visualization through offline processing workflows.
- Forecasting: Built a time series prediction framework to analyze wage growth trends, leveraging unsupervised clustering techniques for detailed insights.
- Document Digitalization and Information Extraction: Designed robust schemes for field extraction and transformation in documents, facilitating descriptive analytics within digital transformation processes.
- Audio Processing: Developed a comprehensive framework for processing help desk recordings, supporting protocol verification, conversation classification, and the retrieval of engagement metrics.

Street 70 # 16A-30, Tower 1, Apartment 806 – Manizales, Colombia

☎ 317-5874629 • ✉ ealeongomez@gmail.com • in ealeongomez • 🐦 @eder_arley

🌐 ealeongomez • 📺 Eder León

6/4/2020- **Data Science**, ARUS-GROUP SURA

1/5/2021 Features:

- I develop analytical programs and machine learning systems using both *Machine learning* and *Deep learning* algorithms, as well as advanced statistical methods to prepare data for its use in prescriptive and predictive models. This allows the innovation and creation of new products and services within the company.

6/11/2019- **Data Analyst**, STRADATA

4/4/2020 Features:

- Created a comprehensive framework for extracting valuable information from individuals within the Wikidata database.
- Conducted through text analysis utilizing advanced Text Mining techniques and developed efficient data mining models using Knime.
- Designed and implemented Machine Learning algorithms specifically tailored for processing documentary images, enabling accurate and efficient analysis.

26/10/2018- **Data Science**, NATIONAL UNIVERSITY OF COLOMBIA, Project: *"Characterization of agricultural crops through remote sensing strategies and image processing techniques"*

7/2/2018- **Data Science**, NATIONAL UNIVERSITY OF COLOMBIA, Project: *"Development of a condition monitoring and fault diagnosis system in hydroelectric power generation systems using a network of high resolution wireless data sensors"*

Skill matrix

	Level	Skill	Years	Comment
Language:	■■■■■	Python	9	Extensive experience in Python with numerous completed projects
	■■■■■	Linux	10	Skilled in server management and embedded systems configuration.
Machine learning:	■■■■■	TensorFlow	7	Deep learning framework expert with custom layer development
	■■■■■	PyTorch	3	Skilled in neural networks for NLP and computer vision
	■■■■■	Scikit-Learn	7	Experienced in classical machine learning model development
	■■■■■	LangChain	1	Developed RAG-based chatbots for improved accuracy and context
Cloud	■■■■■	AWS	5	Designed and optimized architectures for document management projects
	■■■■■	Azure	1	Currently migrating cloud infrastructures from AWS to Azure
Deploy	■■■■■	Docker	2	Developed Docker schemes for efficient model deployment
	■■■■■	FastAPI	3	Built APIs focused on machine learning tasks using specialized frameworks

Publications

2019 **International Conference on Acoustics, Speech, and Signal Processing**, IEEE, Brighton (UK)

Article: *"Time series prediction for kernel-based adaptative filters using variable bandwidth, adaptative learning-rate, and dimensionality reduction".*

2019 **Pattern Recognition Letters**, EL SEVIER

Article: *"A time-series prediction framework using sequential learning algorithms and dimensionality reduction within a sparsification approach".*

Languages

English Intermediate B1 (Kaplan International Edinburgh)

United kingdom (UK)

References

Academic Sergio Garcia Vega. Research Scientist (University College Dublin). Phone: (+44) 7783-361984

Labor Arnold Perez Contreras. Electrical engineer. Operational information analyst. Phone: 315-2350082

I declare that all the information mentioned is true and take full responsibility for its accuracy.

Thank you very much for considering my curriculum vitae.

Street 70 # 16A-30, Tower 1, Apartment 806 – Manizales, Colombia

☎ 317-5874629 • ✉ ealeongomez@gmail.com • in ealeongomez • 🐦 @eder_arley

🌐 ealeongomez • 📄 Eder León