

# LUIZ RENNÓ COSTA

Data Scientist | Data Engineer | Machine Learning Engineer

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Rio de Janeiro, Brazil

in luiz-rennó-costa

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## STRENGTHS

Python pandas numpy  
sklearn keras tensorflow

Data Wrangling ETL/ELT  
ML Pipelines ML Modelling

Docker Kubernetes  
SQL/NoSQL Airflow

PySpark Hadoop

GCP Firebase Dataproc  
Git Linux

## LEARNING

Deep Learning pytorch

Reinforced Learning

Audio Processing

## LANGUAGES

Portuguese: **Native**

English: **Fluent**

## REFERENCES

### Tech Leaders

in Victor Redivo

in Fulvio Neto

in Felipe de Albuquerque

### Teammates

in Aline Goulart

in Fabio Valonga

## ABOUT ME

*Hello, I'm Luiz, a MSc in Electrical Engineering focused on Machine Learning research, currently working on the Data Engineering field on a quest to become a full-fledged specialist on the Data and Machine Learning fields. I enjoy tough challenges and thinking outside the box in order to solve them.*

## EXPERIENCE

### Data Engineer | Data Scientist | Loft

02/2022 - 03/2023

Remote

- Refined the team's entire code structure, improving performance and code/ML reproducibility.
- Improved several ETLs by optimizing queries, PySpark code and table partitioning.
- Worked together with other engineering teams to map and define multiple improvement points for the entire Data Chapter.
- Researched and implemented a StableDiffusion-based application to "decorate" apartment photos.
- Created a XGBoost-based model to predict buyer's visit-scheduling probability across time.
- Created and maintained multiple interactive data-viz prototypes using Streamlit and ML Models for the Business Intelligence area.
- Defined and deployed multiple model APIs to production through a SageMaker layer alongside the MLOps team.

### Substitute Teacher | Federal University of Rio de Janeiro

03/2023 - Present

Rio de Janeiro, Brazil

- Teach Electronics and Computing (Python 101) classes

### Data Engineer | Data Scientist | Dextra Consulting

12/2020 - 02/2022

Remote

- Creation of text-processing PySpark jobs for multiple client pipelines on a lakehouse architecture.
- Design and implementation of a Highly Available infrastructure of a Speech-to-Text and text-processing project using GCP (Dataproc, R-MIG, Compute Engine, Firebase, Cloud Function, Build and Run).
- Support and development of machine learning models for sentiment analysis.
- Contributed for the creation of several PySpark jobs for multiple text-processing pipelines for different clients on a lakehouse architecture.

### Data Engineer | Samsung Electronics

01/2020 - 09/2020

Campinas, Brazil

- Data extraction procedure automation using a distributed architecture with Apache Airflow and Docker.
- Creation of spark jobs for data indexing and logging of metadata.

# ACHIEVEMENTS



## Honorable Mention

Prize awarded for the 5 finalists (of over 1000) students at the 7th Week of Academic Integration at UFRJ



## Hackathon Winner

Winner of the first Hackathon hosted at UFRJ



## Completed Deep Learning Specialization on Coursera

The courses included:

- Neural Networks and Deep Learning
- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization
- Structuring Machine Learning Projects
- Convolutional Neural Networks
- Sequence Models



## Published Articles

- *Medical Engineering & Physics*
- Research in Nondestructive Evaluation
- ABM Proceedings
- IFAC-PapersOnLine

- Relational database architecture and modeling for event logging.
- General automation of procedures and ETLs using Bash, Python, and Docker.
- Development of database-interface APIs using NodeJS.

## Data Scientist | Grupo SOMA



07/2019 – 12/2019



Rio de Janeiro, Brazil

- Implementation of a cluster using Kubernetes (GKE) for the orchestration of dockerized ETLs in Python.
- Creation of a scalable development platform used for several projects using Jupyter Hub hosted in a cluster with Kubernetes.
- Development of a workshop on data science, machine learning models and their applications.
- Implementation of a supervised model to predict sales of new products based on historical data and visual characteristics, with direct development on the whole machine learning chain, from data processing to serving the model through a REST API using Flask.
- Establishment of a work flow to analyze and compare machine learning models using MLFlow.

## Masters Scholarship | COPPETEC



03/2017 – 03/2019



Rio de Janeiro, Brazil

- Development of an autonomous system for defect propagation monitoring based on acoustic emission on rigid pipes

## Academic Internship | Biomedical Engineering Program - UFRJ



2016 – 2017



Rio de Janeiro, Brazil

- Research in applied control for bio medicine, with a focus on the rehabilitation of patients with Spasticity.

# EDUCATION

## MSc. in Electrical Engineering | Federal University Of Rio de Janeiro



03/2017 – 04/2019



Rio de Janeiro, Brazil

- GPA: 2.88/3.0 (A)
- Study and research on applied machine learning techniques and models for a project in the Oil and Gas industry in collaboration with PETROBRAS.

## BSc. in Electronics and Computer Engineering | Federal University Of Rio de Janeiro



03/2013 – 03/2019



Rio de Janeiro, Brazil

- GPA: 8.3/10.0