# Carlo Domenico Longo de Lemos

## **Applied Machine Learning Scientist**

Sao Paulo, Brazil | carlodllemos@gmail.com | LinkedIn | GitHub | Portfolio

#### **WORK EXPERIENCE**

Serasa Experian (credit bureau) | Latin America DataLab Staff Data Scientist Sao Paulo, Brazil

09/2023 - Present

• For the past 4 months, I have led GenAl implementations across Serasa as the team's tech lead. Coordinating a team of four individual contributors in building NLP applications such as a legal copilot and a custom email campaign generator. Leveraged the use of retrieval augmented generation minimizing hallucination.

Serasa Experian (credit bureau) | Latin America DataLab

Sao Paulo, Brazil

**Senior Data Scientist** 

05/2023 - 08/2023

- Introduced a MLOps template using Docker and Airflow for automated client backtesting.
- Developed an insurance claims forecasting framework that outperformed the previous model by over 10 ROCAUC points, surpassing industry benchmarks.

Serasa Experian (credit bureau) | Latin America DataLab

Sao Paulo, Brazil

**Data Scientist II** 

11/2021 - 04/2022

Led a team of two junior data scientists in developing a credit score for the agricultural sector resulting in a product that
raises 5M USD annually. Defined target population and designed business-centric metrics. Replaced external data
source, improving model autonomy without sacrificing performance.

Itaú Unibanco (bank) | Advanced Analytical Consulting Management

Sao Paulo, Brazil

Data Scientist I

11/2020 - 10/2021

Led a team of two data science interns in developing a model to set monthly sales targets to Itaú's bank officers using
causal inference uplift/heterogeneous treatment effect models. A/B testing validated projected 3% annual revenue
increase for tested products.

Itaú Unibanco (bank) | Advanced Analytical Consulting Management

Sao Paulo, Brazil

**Data Science Intern** 

10/2019 - 10/2020

- Designed causal inference model for pricing, assessing Itaú portfolio elasticity. Introduced a new pricing dimension, impacting 30M customers.
- Enhanced business processes using pandas, SQL and Hive, reducing operation time.

#### **EDUCATION**

University of São Paulo (USP)

08/2021 - 07/2024

Master's degree in Probability and Statistics

<u>GPA 4/4</u>

Federal University of ABC (UFABC)

05/2015 - 04/2021

Bachelor's degree in Science and Technology (Pure Mathematics)

GPA 3.88/4

## **OPEN KNOWLEDGE AND OPEN SOURCE SOFTWARE**

# Machine Learning blog

vitaliset.github.io

Vitali Set is my personal site where I share insights and knowledge about Machine Learning.

scikit-learn

All my pull requests to scikit-learn

datalib

All my pull requests to datalib

#### **TOOLS I USE DAILY**

functional and oop with python, numpy, matplotlib, scikit-learn, pytorch, xgboost, langchain, pandas, sql, pyspark, git, pytest, ci/cd, airflow, docker, linux, azure.

## **RESEARCH FELLOWSHIPS**

### **Wada Property in Doubly Transient Chaos**

11/2018 - 09/2019

FAPESP (São Paulo Research Foundation)

#### The Euler-Maclaurin formula and a few applications in Pure and Applied Mathematics

09/2017 - 08/2018

FAPESP (São Paulo Research Foundation)

# Numerical study of orbits in the 3-body problem

08/2016 - 07/2017

CNPQ (Brazilian National Council for Research and Technological Development)

## Introduction to stellar structure and evolution

08/2015 - 07/2016

UFABC, Researching Since the First Day Program