

# ALVARO VASCONCELLOS ARAUJO DE AVILA

## CONTACT

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📍 Lecce - LE, Italy

## SKILLS

Data Assimilation  
Python, CDO, NCL  
Land Surface Modeling  
Climate indicator index  
Climate data analysis  
Sustainability climate report  
LDAS, LIS, GLDAS, GDAS, ERA5 remote sensing data

## EDUCATION

**Instituto Nacional de Pesquisas Espaciais (INPE)**

### PhD - Meteorology

2019-2023

Impact of radiation and precipitation forcing on energy balance under different surface conditions in South America. Using Land Surface models for simulating the energy components of the balance and creating a regional LDAS.

**Universidade Federal de Pelotas**

### Masters - Meteorology

2017-2019

Impact of shortwave radiation parameterizations on the WRF regional model in the southern region of Brazil.

**Universidade Federal de Pelotas**

### Bachelor degree - Meteorology

2013-2016

Coupling of the low-level jet of South America with the subtropical jet in inducing the formation of tornado-producing storms in southern Brazil.

## LANGUAGES

Portuguese 

English 

Spanish 

## PROFILE

I am a meteorologist with expertise in Land surface and Atmospheric Modeling, data analysis, climate risks and sustainability. Over the past few years, I have focused my efforts on advanced surface modeling research, utilizing remote sensing data to enhance simulations of energy balance under different surface conditions in South America, using the LDAS structure. Moved by my passion for sustainability, I'm driven to leverage my meteorological expertise to contribute to society in constructing a resilient future. I hope to use my expertise to commit to enhancing climate change what is underscores my career's purpose.

## WORK EXPERIENCE

### Junior Research

- Earth System Data Assimilation (ESYDA) researcher 2024
- Modeling and Data Analyst

### Data Analyst

Carbon Climate Smart Solutions 2023

- Climate risk analysis
- Emissions inventory
- Building climate resilience projects for private companies.

### Sustainability Analyst

Climatempo 2021-2022

- Climate Data Analyst
- Development of commercial proposals
- Atmospheric Modeling
- Climate Resilience and carbon markets
- Surface modeling and remote sensing data analyst

## COURSES

### Instituto Nacional de Sustentabilidade (INBS)

Sustainability Analyst and Utilization of Climate Data to Guide Companies on the Sustainable Journey.

### Master ESG (Ambipar)

Introduction to ESG pillars and how climate change can impact the decision-making of private companies.

### Fundamentals and Advanced of REDD+ (UNFCCC)

Development of carbon credit projects related to deforestation.

### Introduction to climate-related disclosures: Starting the climate journey (CDP)

Analyzes corporate climate-related data to promote transparency, encourage emissions reductions, and drive sustainable practices among organizations worldwide.

### How sustainability is changing the financial sector

Development of decarbonization plans through SBTi (Science Based Targets Initiative), ULI (Urban Land Institute), World GBC (Green Building Council), UN Net Zero Commitment; Preparation of inventories and analysis of physical and transition risks related to climate.

## PUBLICATIONS

DE ÁVILA, Álvaro Vasconcellos Araujo et al. Assessing the Performance of the South American Land Data Assimilation System Version 2 (SALDAS-2) Energy Balance across Diverse Biomes. **Atmosphere**, v. 14, n. 6, p. 959, 2023.

DE ÁVILA, Álvaro Vasconcellos et al. Estudo do Desempenho de Dois Códigos de Transferência Radiativa do Modelo WRF para o Sul do Brasil. Anuário do **Instituto de Geociências**, v. 43, n. 1, p. 286-299, 2020.