

# DIONÍSIO CÂNDIDO NHADELO

## PERSONAL DETAILS

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*Birth:* June 21<sup>st</sup>, 1994  
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## AMBITIONS/GOALS

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Advance my studies to a master and eventually a PhD degree in the fields such as Data Science and Machine Learning Astrophysics and Radio Astronomy, fields that are still coming up in Mozambique. I'm really amazed by the beauty of these sciences that consists in extracting information from data and use it to solve real world problems or answer questions from different fields.

## SKILLS

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*Languages:* Portuguese (Native)  
English & Changana  
*Programming* Python, R & JavaScript  
*Languages:*  
*Softwares:* Linux, LaTeX, Windows  
CASA (basic), GrADS, GIS, SPSS  
Microsoft (Excel, word, point)

## EDUCATION

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**Degree in Atmospheric Science**

**2014 - 2020**

*Eduardo Mondlane University*

### **Project:**

Evaluation of CHIRPS precipitation estimates for Mozambique from 1981 to 2017. It consisted in evaluating rainfall data from a satellite to acquire if they can be used for drought and flood monitoring in Mozambique.

**High School**

**2008 - 2012**

*Matola Secondary School*

## **WORK EXPERIENCE**

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### **Tutor, HPC & Python, DARA**

**2021**

Tutor of High Performance Computing and an Introduction to Python for DARA students at Eduardo Mondlane University. The main role was to introduce Linux command line and python scripting to DARA student, as well as to assist them to complete the program tasks.

### **Organizer & Tutor, DARA BIG DATA,**

**2021**

Organizer and Tutor of the first event of DARA BIG DATA hackathon in Mozambique, it was held at Eduardo Mondlane University. The main role of this event was to introduce in a practical way the concept of data science and Machine Learning to Mozambican students through satellite image processing in python.

### **Inter**

**2018**

Worked as Monitoring Officer at National Institute of Disaster Management (INGD). The role was to use meteorological models to predict areas with a huge possibility to be flooded in case of extreme rainfall, after identify the areas I should map those areas in order to emit an meteorological alert and to help the rescue team.

### **Private Tutor**

**2014 - 2019**

Used to work as a private tutor in math and physics for people in high school. This activity skilled me with such capacity to well organize myself, to plan and execute tasks in a right order and the ability to communicate, share and work as a team, also to develop the leadership skills.

## **TRAINING**

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### **Data Science Unit: I**

**2020**

#### ***WorldQuant University***

Scientific Computing & Python. This module covered from basic to advanced python programming and data science packages such as pandas, numpy and scipy, matplotlib and seaborn for data visualization.

### **Data Science Unit: II**

**2020**

#### ***WorldQuant University***

Machine Learning & Statistical Analysis. In this module was applied the knowledge acquired in module-1 to learn about machine learning packages in python. This module covered from basic to advanced knowledge to build machine learning

models, both supervise and unsupervised machine learning models. On top of that acquired skills in statistical analysis, clean and fit data to model, train and test the model.

### **Python for Data Science**

**2020**

#### ***Cognitive Class, IBM.***

Basic python course for beginner offered by IBM. This covered syntax, structures of control, loops, functions, classes, reading and writing files and data structures, all needed for data science in python programming language.

### **Remote Sensing**

**2020**

#### ***China Meteorological Administration - CMA***

Basic Principles of Satellite Remote -Sensing offered by the China Meteorological Administration Training Course, base in Beijing. This training was based in both geostationary and polar orbits of Chinese meteorological satellites constellation, Fung-Yun.

### **DARA (Development in Africa With Radio Astronomy)**

**2018- 2019**

It took place in Maputo at Eduardo Mondlane University and in Krugersdorp at Hartebeesthoek Radio Astronomy Observatory (HartRAO), this consisted in theory and hands-on in Astrophysics, Linux, Python Scripting, maintance of telescope, receiver and Very Long Baseline Interferometry (VLBI) equipment. VLBI observations, survey astronomy, reduction and analysis of VLBI data.

## **REFERENCES**

1- Prof. Dr. Atanásio João Manhique. Senior Lecturer at UEM, FC, Physic's Department. Contacts: Email: [amanhique@gmail.com](mailto:amanhique@gmail.com), Phone: (+258) 842053015.

2- Prof. Dr. Cláudio Moisés Paulo. Senior Lecturer at UEM, FC, Physic's Department. Contact: Email: [claudiompaulo@gmail.com](mailto:claudiompaulo@gmail.com), Phone: (+258) 850516002.

3- Dr. Nikhita Madhanpall. Office of Astronomy for Development, South African Astronomical Observatory (SAAO). Contact: Email: [nikhita@astro4dev.org](mailto:nikhita@astro4dev.org).