Martilio Banze

Physicist-Meteorologist and HPC & Linux Systems Administrator

Personal Information

- Martilio Banze
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- House No. 43, 1114 (P. Code), Matola City, Mozambique
- September 17, 1993
- Xai-Xai City (Gaza)
- Male
- Mozambican
- Married
- martiliobanze.github.io
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Technical Skills

Skill	Level
Linux/Unix Administration	●●●●●
Python, R	●●●●○
Oracle Database	●●○○○
HTML e JavaScript	●●○○○
Parallel Processing with MPI and Python	●●●○○
WRF Model	●●○○○

Education

Bachelor's Degree in Meteorology   **2013 - 2018**
Universidade Eduardo Mondlane (UEM), Maputo
Thesis: Remote Sensing/IDL/Atmospheric electric density/

Bachelor's Degree in Physics and Mathematics   **2018 - 2024**
Universidade Pedagógica, Maputo
Thesis: Computational Physics/3D/Schrödinger Eq./HPC/Python

Technical Courses

Introduction to TCP/IP Architecture   **May 2024–Jun 2024**
Escola Superior de Redes, Brazil

Introduction to Linux   **Jun 2024–Jul 2024**
Escola Superior de Redes, Brasil

Practical Course in High-Performance Computing (HPC)   **Oct 2022-Set 2022**
Center for High-Performance Computing (CHPC), South Africa

Advanced Network Management   **Mar 2022-Mar 2022**
INAGE,IP/MoRENet

Astrophysics and Space Sciences   **2018-2019**
Hartebeesthoek Radio Astronomy Observatory (HartRAO), RSA

Linux e Python   **2018**
Center of High Performance Computing, RSA

Adaptation to Climate Change and Disaster Risk Reduction   **2018**
UEM/USAID, Maputo

Arc-GIS for Natural Resource Management   **2016**
Universidade Eduardo Mondlane (UEM), Maputo

Experience

HPC Administration Consultant   **Mar 2022-Present**
Instituto Nacional do Governo Electrónico (INAGE,IP)/Mozambique Research and Education Network(MoRENet), Maputo
Manage HPC cluster administration, including the implementation of scientific tools and provide support to national researchers handling large data volumes.

HPC Tutor | Training Workshop   **Oct 2022 - Oct 2022**
INAGE,IP/MoRENet, Maputo
Conducted training workshops on HPC, covering parallel programming, HPC system architecture, code optimization, and problem-solving on a massive scale.

HPC Tutor   **May 2021 - May 2021**
UEM, Maputo
Delivered introductory training in Astrophysics and Space Sciences (DARA Project), focusing on Linux (Shell scripting) and Python.

Languages

Portuguese ●●●●●

English ●●●○○

Interests

■ Passionate about **Systems and Application Administration**, focusing on optimizing system performance and reliability. Enthusiastic about **HPC** and its applications in advanced computational tasks. Interested in **Data Science**, with a focus on analyzing complex datasets and deriving actionable insights. Engaged in **Climate Modeling**, dedicated to studying and simulating climate systems to understand environmental changes and impacts.

Qualities

■ Committed to excellence, demonstrating resilience in challenging environments. Professional ethics are a cornerstone, ensuring integrity in all activities. Constant pursuit of innovation and continuous improvement, with adaptability to change, reinforcing the ability to contribute effectively in dynamic settings.

Information Officer   **2018 - 2021**

Instituto Nacional de Gestão e Redução do Risco de Desastres - INGD/CENOE, Maputo

Efficiently managed the database, performing comprehensive tasks including administration, data cleaning, entry, analysis, and visualization.

Asset Manager   **2016 - 2017**

Movitel, SA, Matola

Managed telecommunications material and office supplies across the Maputo Province, overseeing inventory tracking, asset allocation, and maintenance.

Conferences and Workshops

Workshop and Training on AI for Climate   **Oct 2024**
Services and Environmental Applications

The workshop covered machine learning for forecasting tropical rainfall, cyclones, and floods, with practical sessions on model building, forecast evaluation, and data post-processing

International Conference on HPC (SC23)   **Nov 2023**

Participated in SC23 in Denver, USA, interacted with experts in HPC, explored advancements, and enhanced understanding of trends and innovations.

Forum RNP 2023 (Brsília, Brazil)   **Ago 2023**

Participated in the annual National Network of Education and Research (RNP) event, a platform for networking, relationship building, and updating on the latest trends in Information and Communication Technologies (ICT).

12th SADC Cyber Infrastructure Experts   **Dez 2022**
Meeting and Annual HPC Meeting (RSA)

Provided a conducive environment for knowledge exchange and experience sharing in cybersecurity, highlighting advancements and challenges in HPC.

WRF Model (RSA)   **Nov 2022**

Attended a training workshop, focusing on the use of HPC to effectively utilize advanced technologies for accelerating climate projections.

References

Fialho Nehama, PhD
Universidade Eduardo Mondlane-UEM
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Prof. Donald DK Kurtz
University of Central Lancashir, Preston, UK

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