



RENAN ALVES DE OLIVEIRA

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🐙 GitHub

WORK AND RESEARCH EXPERIENCE

Graduate Research Student

August 2018 – Present

Federal University of Espírito Santo

Vitória, ES

- Developed a database for gravitational lensing systems of wide-field surveys.
- Assisted students with Python and code optimization on their research projects.
- Admin of a high-performance computer cluster.

Visiting Researcher

November 2019 – May 2020

Flatiron Institute, Simons Foundation

New York, NY

- Development of neural network capable of emulating faster and efficiently the evolution of dark matter particles in the universe.
- Work accepted on the Machine Learning for Physics Sciences workshop at the 2020 Conference on Neural Information Processing Systems.

Master Researcher Student

August 2016 – July 2018

Londrina State University

Londrina, PR

- Analyzed data from the Cosmic Microwave Background Radiation obtained by the Planck space observatory.
- Development of software written in Python called polyMV, responsible to convert multipolar coefficients into multipole vectors.
- Statistical data reduction.

Intern

May 2014 – July 2014

Hydrologic Research Center

Del Mar, CA

- Analyzed and modeled numerically the soil stability responsible for landslides using Newtonian mechanics.

Undergraduate Researcher Student

March 2011 – February 2016

Londrina State University

Londrina, PR

- Research development obtaining problem-solving skills such responsible to simulate data from basic assumptions and comparing to real-world observations using statistical analysis and numerical calculations.
- Participation in workshops and events presenting the results obtained.

SKILLS

Python 2/3 ●●●●
Statistical Analysis ●●●●
Code Review ●●●○
Data Visualization ●●●●

Database ●●○○
Code Optimization ●●●○
Machine Learning ●●●○
Dashboarding ●●○○

Git/Github ●●●○
English ●●●●
Problem-solving ●●●●
Flexibility ●●●●

EDUCATION

PhD in Astrophysics | *Gravitational Lensing and Artificial Intelligence*

August 2018 – Expected July 2022

Federal University of Espírito Santo

Vitória-ES, Brazil

Master's in Physics | *Computational Cosmology*

August 2016 – July 2018

Londrina State University

Londrina-PR, Brazil

Applied Physics | *Science Without Borders Program*

July 2013 – May 2014

California State University, San Marcos

San Marcos-CA, U.S.A.

Bachelor's in Physics

March 2010 – March 2016

Londrina State University

Londrina-PR, Brazil