



RENAN ALVES DE OLIVEIRA

Brazilian
Maringá, Paraná, Brazil
+55 (44) 99921-7655
fisica.renan@gmail.com
github.com/oliveirara

WORK AND RESEARCH EXPERIENCE

Graduate Researcher 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.

Undergraduate Student 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 Student Researcher

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