RENAN ALVES DE OLIVEIRA

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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 Univeristy — 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

Hydrological 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

Skill	Level	Skill	Level	Skill	Level
Python 2/3	●●●●	Database	●●○○	Git/Github	●●●○
Statistical Analysis	●●●●	Code Optimization	●●●○	English	●●●●
Code Review	●●●○	Machine Learning	●●●○	Problem-solving	●●●●
Data Visualization	●●●●	Dashboarding	●●○○	Flexibility	●●●●

EDUCATION

PhD in Astrophysics | *Gravitational Lensing and Artificial Intelligence*
August 2018 – *Expected* July 2022

Federal University of Espírito Santo — Vitória, Brazil

Master's in Physics | *Computational Cosmology*
August 2016 – July 2028

Londrina State University — Londrina–PR, Brazil

Applied Physics | *Science Without Borders Program*
July 2013 – March 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