Felippe Pereira Amorim, PhD

Computational Researcher | Data Scientist | Machine Learning Engineer

Dublin, Ireland | f.amorim.ds@gmail.com | +353 (83) 1439056 |

Summary

I am a Ph.D. graduate in Computational Physics with expertise in mathematical modeling, computer simulations, algorithm development, and programming. My experience includes statistical analysis of big data and applying machine learning models for predictive analysis. I have successfully led scientific projects, demonstrating strong research, analytical, and problem solving skills along with effective team collaboration. I am eager to take advantage ofantage of these capabilities to solve real-world challenges.

Experience

Doctoral Researcher, Theoretical Physics Institute, *(IFT-Unesp, Brazil)*   *Feb 2019 – Apr 2024*

- Developed multiple standalone numerical Python programs to quantitatively evaluate the specific physical properties of materials.
- Successfully utilized the inversion method, a supervised learning classification algorithm, to predict critical variables in complex quantum systems. The findings resulted in peer-reviewed publications.
- Performed atomistic simulations in a High-Performance Computing (HPC) environment, utilizing the supercomputer infrastructure of Unesp(one of Latin America's largest grid structures), Trinity College Dublin and UNICAMP. The calculations resulted in peer-reviewed articles on the unique thermoelectric properties of quantum materials and their applications.
- Worked closely with diverse research groups, applying strong communication and problem-solving skills to support projects involving domain expertise, analytical thinking, and data modeling.

Doctoral Researcher (Exchange Program), Trinity College Dublin – Dublin, Ireland   Jun 2022 – May 2023

- Developed a statistical description of the effect of an ensemble of magnetic impurities on the transport properties of topological insulators.

Education

Computing (Fundamentals of) Masters Qualifier, *Technological University Dublin*	Jan 2025 – Jun 2025
PhD in Computational Physics, *São Paulo State University*	Feb 2019 – Apr 2024
MS in Physics, *São Paulo State University*	Feb 2017 - Jan 2019
Bachelors in Physics, *São Paulo State University*	Mar 2012 - Nov 2016

Skills

Programming: Python ● Numpy ● Pandas ● Sci-kit learn ● PyTorch

Development: HTML ● CSS

Version Control: Git

Others: Data Analysis and Preprocessing ● Web Scrapping ● SQL ● MySQL ● Linux ● HPC ● Mathematical Modeling ● Object Oriented Programming

Languages

Portuguese: Native

English: High - Intermediate / Advanced (TOEFL iBT-certified, Score: 91/120)

Reference

Prof. Dr. Mauro Ferreira - Trinity College Dublin (Reference available upon request)

Prof. Dr. Alexandre Reily Rocha - São Paulo State University (Reference available upon request)