Joao Pedro de Jesus Ferreira

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EDUCATION

PhD. in Astrophysics *University of Edinburgh* `2011-2017`

Thesis title: A broad-band study of the emission-line properties of galaxies.

• I explored a structured dataset of multi-wavelength photometry to discover patterns in multi-dimensional data by applying dimensional reduction techniques and supervised learning with spectroscopic samples.

• In my PhD project I learned to manage my time and to work independently, while integrating constructive feedback in the process.

MSc. in Astronomy *Utrecht University* `2009-2011`

Thesis title: Radiative transfer of Fibrils on the Solar Chromosphere

• In this MSc. I was introduced to high-performance computing in a cluster and parallel programming of ray-tracing 3D radiative transfer to understand the causes of space weather.

BSc. in Physics *University of Lisbon* `2006-2009`

Thesis title: Modelling the tidal heating of Jupiter's moon Io

• This degree constitutes a solid basis to understand simple and complex systems from a conceptual and practical point of view; this as well as the mathematical and computational tools necessary to model and analyse them.

WORK EXPERIENCE

Tutor *University of Edinburgh, Part-time* `2011-2017`

• I have tutored courses across a broad range of disciplines, from Dynamics and Relativity to Computer Modelling in Python.

• This experience enables me to communicate complex ideas clearly and adequately transmit them to people from a variety of backgrounds.

• Working in a team of tutors, I have learned how to share a workload and delegate responsibilities

SKILLS

Software	Python, emacs, GNU/Linux, Git, LaTeX, Beamer, Bash, IDL, MPI, FORTRAN, C/C++, Haskell, R, SQL, HTML+CSS, JavaScript, Office/Libreoffice Suite, GIMP, Blender, OpenShot
Techniques	Principal component analysis, Exploratory data analysis Nonparametric statistics, Machine Learning, semi-analytic models
Interests	Physical Computing with Arduino and Raspberry Pi, Blockchain analysis and trading, web crawlers and IRC/reddit bots, free software, complex systems, Bioinformatics
Languages	Portuguese, English, Spanish, French, German and Dutch

References available upon request.