Ricardo Amadeu

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Personal homepage | [LinkedIn] | [GitHub]

Profile

An avid learner with a curious mind looking to start my career in software development. During my master's degree, I have developed strong analytical skills, as well as a foundational understanding of programming concepts. Eager to integrate an exciting team, learn new skills and actively contribute to optimal solutions.

Education

MSc in Engineering Physics, Técnico Lisboa   Sept 2017 – July 2024

- **Relevant Modules:** Programming (C, Linux), Computational Physics (C++, Linux), Quantum Mechanics, Nanotechnologies and Nanoelectronics

Experience

Summer internship at LIP   July 2018 – September 2018

- Programmed a GUI, in collaboration with a professor and a colleague, which allowed the user to retrieve and analyse data, displayed in real time plots, obtained from scintillators measuring muon rates at surface level.

Projects

Personal homepage   September 2024

- Built my own website from the ground up, with no prior knowledge, using HTML, CSS and Javascript.
- Applied responsive design principles using the flexbox and grid CSS layouts and DOM API, leading to a improved user experience regardless of screen size.

CKM unitarity puzzle with Abelian Flavour symmetries   May 2024
Master Thesis

- Adressed the Cabbibo angle anomaly, proposing a two Higgs doublet model with an extra up isosinglet vector-like quark.
- Wrote Python modules, using the *Numpy* and *iMinuit* libraries, to identify the two cases of interest from an initial set of millions of possible cases.
- Organised data from parameter scans in plots with *matplotlib*, consisting of 10^4 best fit points obtained from a χ^2 minimisation procedure.
- Implemented a Python script to automatically transcribe thesis' results to Latex format, drastically reducing the workload and human error in this process.

Physical simulation   January 2018

- Developed a simulation of two springs attached to a mass, that is itself holding a pendulum.
- Computed numeric solutions using an Euler-Cromer algorithm coded in C
- Built a GUI using the GTK+3 C library allowing the user an intuitive control over the simulation

Certificates

- Cambridge Certificate in Advanced English (CAE)

Skills

Programming: C, C++, Python, HTML, CSS, JavaScript, Linux

Languages: Portuguese (Native), English (Fluent)