

Pedro Manuel Ferreira Pereira, PhD -- Curriculum Vitae

Personal Profile

Age: 29; Nationality: Portuguese

I am an art, cinema, literature, and music enthusiast who studied Physics for 10 years and then transitioned his career towards Blockchain, Smart Contracts, and Software Development, a recent passion of mine. My career in Physics equipped me with a diverse set of skills beneficial for a software developer/architect, including analytical and critical thinking, proficiency in programming languages such as C, C++, Python, and knowledge of Linux and scripting.

In addition to possessing extensive experience and a natural ease in presenting and discussing my work in front of peers, a skill honed through numerous occasions during my PhD, I also had several teaching experiences, where I received positive feedback on my ability to explain complex problems and concepts in a simple manner.

[My GitHub](#)

[My Physics Publications](#)

Work Experience

2023-

Blockchain Developer at [Celfocus](#) - Hybrid, Lisbon

- Worked on Identity and Credential Management, Carbon Footprint Marketplace, and Loyalty Systems projects.
- Gained expertise in Decentralized Identifiers (DIDs), Verifiable Credentials (VCs), Hyperledger Besu, KILT, Solidity, Ethereum and EVM networks, React, Node.js, Ethers.js, Hardhat, Metamask, Truffle, and Foundry.

2021-2023

Teaching Assistant of [Physics of Continuous Media](#) at [Instituto Superior Técnico](#), Lisbon

- Responsible for teaching classes on problem sets within the "Physics of Continuous Media" course. I won the award for the best teaching assistant of the 3rd year of the bachelor's in Physics, awarded by the students.

2019-2020

Private Tutor of High School Mathematics and Physics - Lisbon

2017-2018

Teacher of Programming and Technology at [Happy Code Lumiar](#), Lisbon

- Taught app and game development to students aged 7-16. Used Unity, C# and Java.

Academic Education

2019-2023

PhD in Theoretical Particle Physics - [Instituto Superior Técnico, Lisboa](#)

- [Thesis available here](#)

2016-2018

Master Degree in Theoretical Particle and Nuclear Physics - [Instituto Superior Técnico, Lisboa](#)

- Exchange Semester in Theoretical Particle Physics at [University of Amsterdam](#)

2013-2016

Undergraduate Degree in Physics Engineering - [Instituto Superior Técnico, Lisboa](#)

Courses & Certifications

A selection of the most relevant, see full list at [my Linkedin](#).

- **2023:** Certified Quorum Developer - [Blockchain Council](#) - [my notes](#).
- **2023:** Ethereum and Solidity: The Complete Developer's Guide - [Udemy](#) - [my notes](#).
- **2023:** Full Web3 Website Course - [Learn Web3 with EdRoh](#) - [my notes](#).
- **2023:** Ethereum and Solidity Course - [CryptoZombies](#) - [my notes](#).
- **2022-2023:** Cardano Developer Course - [Gimbalabs](#) - [my notes](#).
- **2022-2023:** IOG Haskell Course & Haskell on Exercism - [IOG](#) - [my notes](#).

Skills

Machine Learning/AI

- Fitting a model to experimental data via Loss function minimization, see [this repository](#).
- Basic Understanding of Reinforcement Learning, see [this repository](#).

Programming Languages

- C, C#, C++, Python, Haskell, Java, Javascript, Typescript.

Blockchain

- Cardano/Plutus, Ethereum/Solidity, Polygon and EVM networks, Hardhat, Ethers, Truffle + Ganache, Foundry, KILT, Hyperledger Besu, Hyperledger Fabric, Quorum.

Web Development

- Backend: Node.js, Express.js.
- Frontend: React, CSS, HTML.

Software Miscellaneous

- Git, Jira, Markdown, CERN's ROOT, Linux, Bash Scripting, Mathematica, LaTeX, Unity, MIT App Inventor.

Languages

- Portuguese (Native), English (Fluent), Spanish (Intermediate), Italian (Beginner), French (Beginner).