

AFONSO PINTO CARDOSO RAFAEL

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EDUCATION

Masters in Computer Science, Faculty of Sciences of the University of Lisbon (dropout)
- Relevant Coursework: Compilation Techniques, Domain Specific Languages, Quantum Computing.

B.S. in Geospatial Engineering, Faculty of Sciences of the University of Lisbon 2016 - 2020

Drumming, International Drum Academy 2016 - 2020

SKILLS

Programming languages Haskell, C, C++, Fortran, Lisp, Typescript, Python

Technical Skills Compiler design and implementation, Web Development, Data processing

Soft Skills Enjoy speaking with people, Enjoy presentations and public speaking

EXPERIENCE

Junior Research Engineer Nov 2023 - Now
Barcelona Supercomputing Center *Barcelona, ES*

- Work on loop fusion within the LLVM infrastructure.
- Benchmark and test my the loop fusion pass.
- Help fight back against bit rotting.

Web Developer July 2023 - Nov 2023
Digital MZN *Lisbon, PT*

- Help with the development of the arms website (React Native & Typescript).
- Help maintain python environments of other members of the company.

Software Developer (Freelancing) April 2023 - May 2023
Bynd *Lisbon, PT*

- Build a web crawler in python to collect data on companies to be displayed on dashboard.
- Using selenium as a dependency to allow interaction between the crawler and the web page.

Researcher (Intern) September 2022 - March 2023
IMDEA Software *Madrid, ES*

- Build relational benchmarks for Liquid Haskell, a compiler plugin that extends Haskell's type system with refinement types.
- Wrote a paper section describing the benchmarks.
- Contributed with solving a bug in liquid-fixpoint ([Pull Request](#))

Research Fellowship January 2022 - July 2022
LASIGE *Lisbon, PT*

- [Freest](#) is a functional programming language that uses session types for safer communication.
- Developed a compiler for the Freest language, targeting JavaScript (Built with Haskell).
- Built a test suite for the compiler.
- [Best Poster](#) - 1st, LASIGE Workshop'22.

Summer with science (Research Fellowship) August 2021
LASIGE *Lisbon, PT*

- Built programs with Freest that later got into the testing suite.
- Found bugs and reporting them during development.

Software Developer (Intern)

2019 - 2020

Think Future

Lisbon, PT

- Built a system to manage aerial information for control of drone flight (Python).

Data Science (Intern)

August 2019 - September 2019

ITC Faculty of Geo-information Science and Earth Observation

Enschede, NL

- Wrote data processing code using Dask, an open-source Python library for parallel computing.
- Lectured practical classes on the Institute.
- Processed geographical information for decision making.

EXTRA-CURRICULAR ACTIVITIES

Discord Admin/Event Manager

2020 - Present

DevPT

Lisbon, PT

- Participated in the devPT talks as Manager.
- Participated in the devPT as Speaker ([Eu uso Emacs, roast me.](#))
- Moderate and Help make decisions on the Discord platform.
- Help manage social media.

MUSIC

Drummer

2019 - 2023

AZMA

Lisbon, PT

- Play drums and help compose the songs.
- Help manage the social accounts and project contacts.
- Participated on the recording of songs like: [Akadom](#)

Guitarist

2022 - 2023

Split Objects

Lisbon, PT

- Support guitarist for the band.
- Help with gigs.

Drummer

2017 - 2019

PodPop

Lisbon, PT

- Played drums and helped compose music.
- Helped record the video clips.
- Participated on the recording of songs like: [Is It Love Or Sacrifice](#), [BlackOut](#), [Spoon Of The Gods](#).

Guitarist

2016

Why Knot

Lisbon, PT

- Played guitar and helped compose music.
- Participated on the recording of songs like: [Nothing Concrete](#).