

JOÃO BARREIROS COELHO RODRIGUES



I'm a 20 years old Electrical and Computer Engineering undergraduate student at IST-ULisboa. My main academic focus are Computer Architectures, Embedded systems and Electronic Design. I'm also interested in procedure oriented programming focused on algorithm applications and optimization, computer networks and systems programming

PROFILE & CONTACT

- September 16th 2002
- Portuguese
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- Homepage
- @Joao-Ex-Machina
- João Barreiros C. Rodrigues

TECHNICAL SKILLS

Programming

C

VHDL

RISC-V Assembly

UNIX Shell

MATLAB

C++

R

x86 Assembly

Operating Systems

GNU/Linux

LineageOS

Microsoft Windows

TempleOS

Software & Tools

Git

Vim/Neovim

LaTeX

GNU Octave

Vivado

Ripes

KiCAD / EDA tools

QEMU / virt. tools

Area softskills

Casual technical support for Arch and other GNU/Linux distribution users.

Casual firmware-level support.

Casual Hardware repair and upgrade (Thinkpad T430, etc.).

Eletronsics repair (Power supplies, antennas, etc.).

Languages

Portuguese

English

German

GENERAL SKILLS

- Ingenuity
- Logical thinking
- Teamwork
- Troubleshooting
- Public Speaking

WORK HISTORY

- 11/2023 - Present

Instituto Superior Técnico
Universidade de Lisboa

Teaching Assistant
- Under the Department of Electrical and Computer Engineering I have been lecturing laboratory and problem classes on the following courses:
Digital Systems (LEEC): 2nd Q. 2023/2024
Programming (LEAer): 3rd Q. 2023/2024
Computer Architectures (LEEC): 4th Q. 2023/2024
- 08/2022 - Present

HackerSchool

President
- Head developer of the student group social and technical spheres.
Commander of a team of over ten people to manage inside and outside communication, marketing, internal projects, material and human resources management.
The main focus of our administration is to revive the hacker spirit and culture inside HackerSchool through the adoption of a series of pro-open learning, pro-free and open source software and hardware policies

EDUCATION

- 09/2023 - Present

Instituto Superior Técnico
Universidade de Lisboa

Electrical and Computer Engineering
Master's in Engineering
- Main area in Computing Systems
Secondary area in Electronic Circuits and Systems
- 09/2020 - 01/2024

Instituto Superior Técnico
Universidade de Lisboa

Electrical and Computer Engineering
Bologna Bachelor's
- Finished Bachelor's with an average of 14 out of 20.
Relevant curricular units included in the degree and respective final grade(s):
Digital Systems: 17/20
Computer Architectures: 17/20
Object Oriented Programming: Project: 19.6/20 | final grade: 17/20
Programming: 2nd project: 18/20 | final grade: 15/20
Algorithms and Data structures: project: 18.3/20 | final grade: 15/20
Computer Networks and the Internet: project: 17/20 | final grade: 16/20

EXTRACURRICULAR ACTIVITIES

- Hacker/Maker:** I've been entangled with the Maker Community since I was a child, attending various workshops on Electronics, Programming, Robotics and Fabrication techniques. Since joining HackerSchool in 2021 I've developed directly or helped develop many projects, some more sucessful than others:
- A BattleBot that never saw the light of day
 - Fixing and Improving a Prusa 3D Printer (WIP)
 - A NFC Access-control system based on a Raspberry Pi Zero W
 - A open-board computer running our Assembly (WIP)
- I've also taught many workshops, particularly on Electronics, IoT and Computing systems: HackerSchool HSWatch Workshop Bundle (2022), HackerSchool Arduino Recruitment Workshop (2022-present), HackerSchool/NEEIIST/RNL-DEI/ Linux Install Party (2022-present)
- Activism and Voluntary Work:** Since February 2023 I have been a member of ANSOL (Associação Nacional para o Software Livre) the portuguese associate organization of FSFE (Free Software Foundation Europe). ANSOL is a non-profit association dedicated to the promotion and development of Computing Freedom.
- I was a volunteer at Lisbon Mini-MakerFaire 2023 helping mostly with resources and space monitoring. I have also been a regular participant/monitor/helper at the Linux Install Parties organized at Instituto Superior Técnico.
- I am also dedicated to the hacker/maker cause, promoting hacker culture and giving my first talk on the matter: *Hacker Culture at IST* during MiniDebConf Lisbon 2023

HISTORY / EXTRA

Historical section of my Curriculum Vitae. Adds non-essential or since deprecated information about education and work history.



OTHER TECHNICAL SKILLS

Software & Tools
LibreOffice Suite
SIMULINK



WORK HISTORY

09/2021-08/2022
HackerSchool

Board Member
Marketing and Communication

Proponent of software reforms inside HackerSchool (switch to FOSS alternatives).
Developer of marketing material such as merchandise, stickers and flyers. Establishment of connections with other student groups and enterprises.

EDUCATION

09/2017 - 08/2020
Escola Secundária
Maria Amália Vaz de Carvalho

Scientific and Humanistic
High School Diploma-
Science and Technology

Received, in 2018, both academic merit and civil merit certificates .
Published in 2018 and 2020 two philosophical treatises on political philosophy and the scientific method, respectively in the yearly school publication on philosophy and psychology - *Fragmente*
Finished high school with a CNAES average grade of 18.3/20

EXTRACURRICULAR ACTIVITIES

Sports: I practiced Judo for six years, reaching the third kyu.
I then switched to Muay Thai, which I practiced for around three years.
From 2017 to 2020 I practiced archery as a School Sport.
In 2018 I won, together with my two teammates, the second place in the archery district school competition.
In 2019 I was appointed referee for the regional school competition.
As of September 2023 I have return to practicing Muay Thai

Learning: I maintain natural curiosity and enjoyment for esoteric programming languages such as brainf*ck, chicken and whitespace. As of now I am the most excited to learn Zig, since it can be interpreted as a modern sucessor to C. **Non-Technical Leisure:** I've a been a fan of tabletop role-playing games (such as Dungeons and Dragons and Call of Cthulhu) for a long time. I'm also a casual player of chess.
I'm a avid reader of medieval fantasy (mostly J.R.R Tolkien and George R. R. Martin) as well as goth and weird fiction (particularly Edgar Allan Poe and H.P. Lovecraft).
I'm a casual player of acoustic and electric guitar with a preference for heavy metal.