JOÃO BARREIROS COELHO RODRIGUES

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

PROFILE & CONTACT

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

TECHNICAL SKILLS

HW Design and Programming

C	●●●●●●●●○○
VHDL	●●●●●●●○○○
RISC-V Assembly	●●●●●●●○○○
UNIX Shell	●●●●●●○○○○
MATLAB	●●●●●○○○○○
C++	●●●●○○○○○○
x86 Assembly	●●●○○○○○○○

Operating Systems

GNU/Linux	●●●●●●●●○○
LineageOS	●●●●●●○○○○
Microsoft Windows	●●●●●○○○○○
TempleOS	●●●●○○○○○○

Software & Tools

Git	●●●●●●●○○○
Vim/Neovim	●●●●●●○○○○
Vivado	●●●●●○○○○○
Vitis HLS	●●●●●○○○○○
LaTeX	●●●●●○○○○○
GNU Octave	●●●●●○○○○○
KiCAD / EDA tools	●●●●○○○○○○
QEMU / virt. tools	●●●●○○○○○○

Area "softskills"

Technical support for Arch and other GNU/Linux distribution users around Alameda Campus.
Casual firmware-level support.
Casual consumer-level Hardware repair and upgrade (Thinkpad T430, etc.) .
Eletronics 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 (9/9 QUC eval.)
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 admnistration 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
Most relevant curricular units included in the degree and respective final grade(s):
Digital Systems Design: Projects:: 17.1/20 Final grade: 17/20
Computing Systems Technologies (*Electronics for Computers and Quantum Computing*): 17/20

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:

- Fixing and Improving a Prusa 3D Printer (WIP)
- A NFC Access-control system based on a Raspberry Pi Zero W (finished)

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

Programming
R ●●●●●●●●●

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 treaties 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.