



TÉCNICO LISBOA



# Axel Carapinha

## Computer Science student

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### Goal

After 2 years at University of Évora, I'm continuing a Bachelor's degree in Computer Science and Engineering at ISTécnico. I'm seeking an internship opportunity that allows me to apply what I know and learn much more. Academically, I aim to maintain the upward trend in my GPA (from 14.8 in the first year to 18.4 in the second). Finally, I'm particularly focused on improving in my main areas of interest: cybersecurity and computer networks. I believe that these challenges will one day lead me to innovate in my field.

### Academic projects

#### RISC-V identifier (may 2023) - [link](#)

Made in University of Évora within the scope of the Computer Architecture I course, in RISC-V Assembly. Among the 3 available characters, it identifies the chosen one and draws a cross over it, using RGB and hue values to calculate the position. Graded 19/20.

#### Computer Graphics (december 2023 - january 2024) - [link](#)

Created 4 animations using 4 different technologies: C2D, SVG, 3JS, and X3D. I implemented OOP with JavaScript and explored considerably beyond the requirements. Developed in UÉvora. I achieved an average of 19/20.

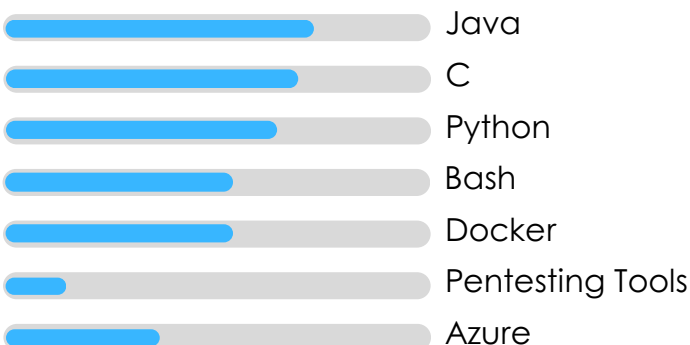
#### Databases (december 2023 - january 2024) - [link](#)

Developed databases for fictional applications, creating efficient queries (in PostgreSQL). Developed in UÉvora. Graded 6/6.

### Certifications

- [Cisco Networking Academy](#)
- [Hack the Box Academy](#)

### Skills



### Languages Other passions

- English (B2)
- Spanish (C2)
- Portuguese (native)
- RaspBerryPi (mini-server)
- Calisthenics and cycling
- Reading (non-fiction)

### Extracurriculars

#### Security Team at Técnico (STT) (september 2024 - present)

Currently a member of the [Security Team @Técnico](#), I focus on web CTFs and actively apply my knowledge to one of my greatest interests: cybersecurity. We participate in competitions weekly, and I continuously strive to increase my contributions: a current minimum training of 10 hours per week. I believe that contributing my own write-ups is not just a goal but also a way to measure the success of this training in the near future.

#### Competitive programming (september 2023 - september 2024)

Each week we received a programming challenge that involved data structures and algorithms, mathematical concepts, teamwork, and quick critical thinking. At the end of the week, we compared solutions to find the most efficient and elegant one. I mainly used Java, but also Python and C.

### Open source projects

#### Private Proxy with an Azure VM (february 2024 - may 2024) - [link](#)

First, a Bash script automates the creation of the SSH tunnel for the proxy. Then, a web scraper initializes an empty Firefox profile that uses this tunnel. Finally, and optionally, the same tunnel can be used from a Docker container.

#### Anki card generator (august 2024) - [link](#)

Multiple services connected via APIs using Docker containers allow the creation of a card with meaning, pronunciation, and personalized dialogue, accessible via the browser. Initially hosted on Azure, the project became self-hosted after the free plan ended.

#### FTP and Broadcast in C (february 2024 - august 2024) - [link](#)

Two C servers built on the same abstraction layer. This layer simplifies the use of sockets while providing the servers with concurrent capabilities based on threads and mutexes. Developed to complement UÉvora's Computer Networks and Operating Systems courses.