Hélder Gomes

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Education

Bachelor's Degree in Computer Science and Engineering Sep. 2022 — Jun. 2025
University of Minho Braga, Portugal
- Cumulative GPA: 16/20 (Top 8%)

University Projects

Fitness Application | Java, Git Grade: 20/20
Object Oriented Program 2023
- Developed a Java-based fitness application, applying Object-Oriented Programming principles to ensure a modular and scalable system.
- Designed an automatic workout plan generator, implemented time jumps, training statistics, and query-based leaderboards to identify top users, enhancing engagement and performance tracking.

Network Monitor | Go, Git Grade: 19/20
Computer Networking 2024
- Designed a network monitor in Go to analyze network links and devices across a distributed environment. Implemented custom UDP-based and TCP-based application-layer protocols, enabling fast communication between multiple agents and a centralized server, with minimal latency.
- Configured a scalable architecture supporting up to 36 multiple agents, using JSON-based task management to define operations and thresholds. Validated the system through thorough testing with CORE, monitoring metrics like latency and bandwidth across various simulated devices.

Lusium | Blazor .NET, Git Grade: 19/20
Computer Labs IV 2025
- Developed an end-to-end application in Blazor .NET from own comprehensive and detailed documentation. The software facilitates inventory management and purchasing of educational robots used in youth programming and computer education.
- Implemented a systematic development approach, encompassing problem contextualization, requirements gathering and analysis, system specification and modeling, database design, interface prototyping, and final solution implementation.

Computer Systems Security | Python, Git Grade: 20/20
Computer Systems Security 2025
- Implemented a secure vault service enabling confidential, integrity-protected, and authenticated file storage and sharing via CLI. It uses symmetric/asymmetric encryption, robust permission controls, group management, and mutual authentication.

Extracurriculars

Pedagogical Department Coordinator 2022 - Present
CeSIUM (Software Engineering Students' Association of the University of Minho) Braga, Portugal
- I commenced my involvement with this Association by assuming the role of a collaborator within the Pedagogical Department. Our objective is to enhance the course curriculum and provide support to the students;
- In my second year at university, I continued my engagement by taking on the role of Co-Director of the Pedagogical Department, overseeing the department's operations and strategic planning.
- Currently, in my final year of my bachelor's degree, I serve as a vowel of the Pedagogical Department, acting as a liaison between the department members and the presidency to ensure effective communication and collaboration.

General Coordinator & Mentor 2022 — Present
CoderDojo Braga Braga, Portugal
- I embarked on my journey as a mentor, where I had the opportunity to instruct children in computing and programming using the CoderDojo Global (Code Club) methodology;
- In my inaugural year of contribution, I assumed the role of DojoCare Responsible, a branch within CoderDojo tasked with extending our ethos and knowledge to underprivileged children. The next year, I continued to serve as the DojoCare lead while also spearheading our flagship event, Coder Camp, a week-long summer program that offers children the opportunity to immerse themselves in a range of engaging activities while gaining foundational knowledge in computer science.
- Currently, I am the Champion (general organizer) of CoderDojo Braga, leading a team of over 10 core members who, through our regular monthly sessions and additional events such as Dojo Care and Coder Camp, engage with more than 300 people each month.

Other qualifications

- **Technical Skills:** Light involvement in projects with `Javascript/Typescript`, `Node/Next.js`, `Vue.js`, `.NET`, `Blazor`, `Golang`, `MySQL`, `Tailwind`, `CSS`, `HTML`, `Haskell`, `C`, `C++`, `Java` and `Python`.
- **Languages**: English (fluent), Portuguese (native)