

HUGO BARROSO MUÑOZ

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Computer Engineering undergraduate at UAM, currently finishing my 4th year. With strong social skills and a fast learner, I fit into any team. Just returned from an Erasmus exchange in Sweden and looking for a challenging and dynamic position to develop my knowledge and gain experience.

PROFESSIONAL EXPERIENCE

INTERSHIP KDPOF, Madrid

Software developer, March 2025 – Present

- Optimization of an XDR system based on Wazuh
- Implementation of a platform for collecting biometric sensor data
- Tools and technologies used: **Python, Wazuh, MySQL**

INTERSHIP CENTER FOR AUTOMATION AND ROBOTICS (CAR) CSIC, Madrid

Virtual reality programmer and developer, June 2024 – August 2024

- Redesigned over 90% of the VR map
- Learned to use the development environment (Unity) at an intermediate level in just 2 weeks without prior experience
- Developed simple AIs for NPCs
- Tools and technologies used: **Unity, C#**

PRIVATE TUTOR ESO – HIGH SCHOOL STUDENTS, Madrid

Private tutor, September 2022 – August 2023

- Helped more than 10 students pass subjects I tutored
- Inspired a desire to learn in several students
- Created dynamic and engaging classes

ROTATING POOL SHIFST, Madrid

Lifeguard, July 2022 – August 2022

- 0 accidents during my time at all pools
- Cleaning and maintenance of pools

ACADEMIC PROJECTS

- Developed a real-time online chess platform with private rooms and matchmaking. Backend with Django and WebSockets; interactive frontend using Vue.js
- Created a full gym management system in Java with GUI built using Java libraries
- Developed a 2D videogame with a custom graphics engine in C to run in Shell
- Designed and simulated quantum gates (X, H, CNOT, Toffoli) and simple circuits in Qiskit, exploring superposition and entanglement
- Built a pipelined RISC-V processor architecture with ALU, registers, and memory capable of executing instructions in VHDL.
- Implemented an ODBC driver in C for SQL database access, including connection management, commands and data types.
- Created a web server from scratch in C supporting HTTP 1.1 with concurrent connections and proper process concurrency handling

PERSONAL PROJECTS

- Built a Magnetotherapy device capable of generating magnetic fields to treat tendinitis (personal case)

EDUCATION

ESCUELA POLITECNICA SUPERIOR, UNIVERSIDAD AUTONOMA DE MADRID, Madrid

Bachelor's degree in Computer Science, September 2021 - Ongoing

- Currently achieved 3 honors distinctions
- GPA: 8/10

TECHNICAL SKILLS

PROGRAMMING:

- C, Java, Python, Ensamblador – Intermediate / Advanced
- HTML, CSS, SQL – Intermediate
- JavaScript – Basic

FRAMEWORKS:

- Django / Flask for web backend
- Vue.js for frontend

ARCHITECTURE & METHODOLOGIES:

- Knowledge of RESTful API development
- Agile methodologies like Scrum
- Design patterns such as Singleton, Factory

TOOLS:

- Version control with Git
- SQL and NoSQL databases using PostgreSQL, dBeaver, MongoDB, as well as ACID principles

CYBERSECURITY:

- Network security design and evaluation
- Implementation of symmetric and asymmetric cryptography (AES, RSA), digital certificate management, and TLS protocols
- Experience with Wireshark and Nmap

HABILIDADES ADICIONALES

- English C1 level (B2 certified)
- Russian A1 level
- Problem-solving and creativity
- Project and small team (4-5) management
- Strong teamwork and communication skills
- Flexibility