

Carlos Mazcuñán Blanes *Software Developer*

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🔗 <https://carlosmazcu.github.io/portfolio/>

📍 Valencia, Spain

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About me

I am a programmer specialized in C++ and video game development, with a strong interest in graphics programming and interactive technologies. I consider myself a self-taught, proactive, and motivated individual, eager to continue learning and growing in the field of software and game development.

Education

HND in Computing (Videogame Programming)

09/2022 - 06/2025 | Valencia, Spain

ESAT - Escuela Superior de Arte y Tecnología

Specialized in C++, learned graphics programming with OpenGL, low-level optimization and performance, worked with various OS and devices like Raspberry Pi, and gained experience in game development.

Experience

While studying, I worked part-time in various restaurants, both as a waiter and in the kitchen. This experience strengthened my skills in working under pressure, teamwork, adaptability, communication, time management, and problem-solving.

Internship - AppSec Consulting S.L.

07/2025 | Valencia, Spain

- Developed a cybersecurity web application serving as a vulnerability information hub.
- Connected to multiple APIs and managed vulnerability data.
- Implemented logic to prioritize vulnerabilities according to each company's assets.
- Worked with *JavaScript* and *Node.js* in a professional environment.

Projects

Inside The Crow's Nest

09/2024 - 07/2025

Steam Published Survival Horror Game developed in Unreal Engine 5

- Part of a 16-member team.
- Focused on gameplay programming and game mechanics.
- Develop the interaction system.
- Contribute to developing other systems and mechanics.

Raftel Engine

09/2024 - 06/2025

Custom Rendering Engine

- Real time C++ and OpenGL rendering engine.
- Featured Entity Component System and multithreaded job system.
- Deferred Render, HDR with dynamic tone mapping and PBR.
- Shadow Mapping.

PhyloGen

L-System Vegetal Generator

03/2025 - 05/2025

- Procedural generation of 2D and 3D plants and trees using L-systems
- Exports to custom 3D mesh formats, enabling real-time rendering and editing.
- Simulates biologically-inspired growth patterns with customizable rulesets.
- Focus on mathematical modeling, performance, and visual realism.

Skills

- **Languages:** C, C++, ARM Assembly.
- **Performance:** Algorithm optimization, low-level performance tuning, debugging.
- **Graphics & Game Development:** OpenGL, Unreal Engine 5, Unity.
- **Tools:** Git, Perforce and Visual Studio.
- **Strengths:** Self-taught ability and portfolio of completed projects, previous experience in teamwork (game jams, collaborative projects), remote availability, adaptability to different work environments.