Carlos García Segura

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Summary

Aspiring video game programmer with a Master's in Advanced Programming for AAA Video Games. Proficient in C++, C#, Unity, and custom engines. Passionate about creating engaging games with a track record in collaborative development and team leadership.

Education

Master's Degree in Advanced Programming for AAA Video Games *2023-Present*
Technical University of Catalonia, Barcelona
Relevant Coursework: Engine systems, Gameplay systems, Computer graphics, Game design

Double Degree in Computer Engineering and Business Administration *2017-2023*
University of Granada, Granada
Relevant Coursework: Object-Oriented Programming, Data Structures, Algorithms

Skills

- **Languages:** C++, C#, Java, JavaScript, Ruby
- **Game Engines:** Unity, Custom Engine
- **Graphics:** OpenGL
- **Tools:** Git, GitHub, Visual Studio, ClickUp
- **Soft Skills:** Leadership, Teamwork, Problem-solving, Decision-making

Projects

HelHeim Engine

- Led 19 developers in designing and implementing the engine using C++ and OpenGL.
- Implemented core systems, including gameobjects and efficient scene management and a custom scripting system using DLLs for enhanced modularity and flexibility.
- Developed advanced graphics rendering techniques and optimized real-time lighting, improving visual fidelity with real-time shadow mapping, a custom decal system, and IBL support (Image-Based Lighting).
- Coordinated development through Agile methodologies, leading sprint planning, code reviews, and utilizing Git for version control to ensure smooth and efficient collaboration.

Chrysalis (Developed with HelHeim Engine)

- Collaborated with a 28-member team to design and develop a top-down shooter game from concept to completion.
- Led 19 developers in designing and implementing the game using a custom engine and C++.
- Developed game mechanics, including battle areas and enemy spawners enhancing game difficulty and player engagement.
- Developed and optimized all primary character weapons, focusing on responsiveness and balance to improve the overall gameplay experience.
- Implemented advanced AI behaviour using state FSM (Finite State Machines) enabling complex enemy interactions.

AstroSimu (Developed with Unity)

- Computer Science Degree Final Project.
- Simulated gravitational forces between celestial bodies.
- Implemented procedural generation algorithms for diverse planets.

Experience

Software Engineer Intern *2022*
Unit4, Granada

- Part of a team of interns developing a web application using C#, SQL, React, and .Net.
- Implemented CRUD operations to ensure proper functionality and user interaction.
- Served as Team Scrum Master, coordinating sprints and stand-ups.

Languages

English: Fluent, Cambridge English First Certificate
Spanish: Native