

# CESAR MOLTO MORILLA

COMPUTER GRAPHICS R&D ENGINEER / PHD CANDIDATE

## ABOUT ME

**NATIONALITY**   **BIRTH DATE**

Spanish   19th Nov. 1998

**GENDER**   **MARITAL STATUS**

Male   Single

**PHONE NUMBER**

+34 620893530

**EMAIL**

cmoltomorilla@gmail.com

**LINKEDIN**

<https://linkedin.com/in/cesar-molto-morilla>

**PORTFOLIO**

<https://cesarmolto.github.io>

## LANGUAGES

**ENGLISH**

Full Professional Proficiency | CAE (C1)

**JAPANESE**

Elementary Proficiency | JLPT N3 (B1)

**SPANISH**

Native Proficiency | Mother tongue

**CATALAN**

Native Proficiency | Mother tongue

## SKILLS

**GRAPHIC API'S**

DIRECT3D12 / VULKAN / OPENGL /  
WEBGL

**GRAPHIC DEBUGGING TOOLS**

NVIDIA NSIGHT / PIX / RENDERDOC

**GPU PROGRAMMING**

HLSL / GLSL / CUDA

**PROGRAMMING LANGUAGES**

C / C++ / C# / JAVA / JAVASCRIPT

**VERSION CONTROL SOFTWARE**

GIT / PERFORCE / MERCURIAL

**OTHER**

TEAM WORK / FAST LEARNER /  
EFFECTIVE ANALYSIS AND PROBLEM-  
SOLVING / HIGH ADAPTABILITY

## WORK EXPERIENCE

**GAMEPLAY GALAXY (REMOTE, SPAIN)**

Computer Graphics programmer

December 2024 - Present



- Development of graphic features for the Trial Xtreme Freedom game on Android and iOS platforms.
- Collaborated closely with artists and level designers to implement and integrate level-building tools into the existing development pipeline.
- Identified critical performance bottlenecks across CPU and GPU workloads, proposed optimization strategies, and coordinated their implementation.
- Expanded render pipeline features, and developed shaders and support nodes for Unity Shader Graph, while also supervising shader development to ensure optimal performance.

**SQUARE ENIX (TOKYO, JAPAN)**

Computer graphics R&D engineer

January 2023 - December 2024

**SQUARE ENIX**

- Researched and developed experimental graphics features in-house, later integrated into production engines (UE4, UE5, proprietary).
- Key R&D work: Ray-Traced Tessellation-Free Displacement Mapping and real-time skin/hair path tracing in UE5.
- Supported AAA titles (Final Fantasy series, Triangle Strategy) on PC and VR by resolving performance issues, fixing visual artifacts, and assisting teams with milestones.

**HANDY GAMES (WÜRZBURG, GERMANY)**

Graphics and gameplay programmer

September 2020 - May 2021



- Developed Titan Quest: Legendary Edition for Android and iOS.
- Implemented rendering features for UI elements, and controller-specific graphics and animations.
- Integrated gamepad support, programmed game rules, and optimized memory and rendering performance.

## RESEARCH PUBLICATIONS

**DDP TRANSMITTANCE SHADOW MAPS**

This research, started as a collaboration with the graphics company SEDDI, focuses on physically accurate fabric rendering. Key contributions include:

- A Dual Depth Peeling extension that captures both transparency and translucent layered shadows in semi-transparent objects..
- Full control over light interactions across geometry layers, enabling effects like auto-occlusion and inter-layer scattering—unachievable with existing methods.
- Realistic, free of relevant artifacts results with real-time performance.

Intended Journal: Computer & Graphics

## ACADEMIC RECORD

**REY JUAN CARLOS UNIVERSITY (MADRID, SPAIN)**

PhD in Computer Graphics and High Performance Computing

2023 - Present

Master's Degree in Computer Graphics, Games and VR. GPA: 8.96 / 10

2021 - 2023

**UNIVERSITY OF ALICANTE (ALICANTE, SPAIN)**

Software Engineering. GPA: 7.90 / 10

2016 - 2021

**ATHLONE INSTITUTE OF TECH. (ATHLONE, IRELAND)**

Software Engineering. GPA: 8.93 / 10

2018 - 2019