CESAR MOLTO MORILLA

COMPUTER GRAPHICS R&D ENGINEER / PHD CANDIDATE

ABOUT ME

NATIONALITY
Spanish

BIRTH DATE
19th Nov. 1998

GENDER
Male

MARITAL STATUS
Single

PHONE NUMBER
+34 620893530

EMAIL
cmoltomorilla@gmail.com

LINKEDIN
https://linkedin.com/in/cesar-molto-morilla

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 PROBLE-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*

- 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*