Tiago Costa

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BACKGROUND

Tiago Costa is a real-time graphics/engine programmer born in Portugal in 1993. He received his BSc degree in Computer Science from Universidade do Porto in 2014. He's been interested in games programming, more specifically in real-time graphics, since about 2008.

He's up-to-date on, state of the art, real time rendering techniques including physically based shading, shadows and post-processing effects. He's always looking for ways to improve performance by optimizing code and data layouts.

EXPERIENCE

Graphics Programmer – Rockstar North
December 2017 – Present

Junior Graphics Programmer – Rockstar North
August 2015 – December 2017

MAIN SKILLS

- Solid 3D graphics theory and math knowledge
- Strong C/C++ programming skills
- In-depth knowledge of Direct3D11/12, Gnm and Metal
- Experience with PS4 and Xbox One development
- Low-level game/graphics engine programming experience
- In-depth knowledge of CPU and GPU architectures
- Strong code and data optimization skills
- Strong debugging skills
- Multi-threaded programming experience
- Strong machine learning and neural networks knowledge
- Basic SIMD (SSE) programming experience
- Compute Shader (GPGPU) programming experience
- Languages: C/C++, HLSL, x86 Assembly, Lua, Javascript, Python, Haskell, Java, C#, HTML
- Strong written and verbal communication skills

PROJECTS

Aqua Game Engine (2013 – 2015)
http://www.tiagovcosta.com/aqua (open source)

Designed and implemented the engine architecture, with a focus on excellent performance using cache friendly data layouts.

Implemented many state of the art rendering techniques, including tiled deferred lighting, physically based shading, temporal AA, cascaded shadow maps, volumetric lighting, screen space reflections, depth of field, motion blur and tone mapping.

Development has continued in private since 2015 (details provided on request).

EDUCATION

Universidade do Porto, Portugal
Bachelor of Computer Science (2011-2014)