Richard Palacio

Altamont, NY 12009 USA │ richardpalacio5405@gmail.com │ (914)374-3598

https://richardpalacio.com/ │ github.com/richardpalacio/ │ linkedin.com/in/richard-palacio-7a644118/

OBJECTIVE

Seasoned software engineer specializing in computer graphics, rendering, shading, and game engine development. Seeking a position to leverage my expertise in advanced graphics techniques and engine optimization, contributing to innovative and immersive gaming experiences.

WORK EXPERIENCE

Daybreak Game Company, LLC   Jul 2021 - Aug 2024
Senior Software Engineer, Graphics
- Shader bug fixes, post-processing effects, water caustics, tessellation, PBR lighting, AMD FSR 1.0, PCF filtering
- Improved in-house engines: reverse-z depth, pipeline stages, LOD texture loading, animation loading, viewport rendering
- Enhanced PS4 performance with Razor debugging and crash analysis tools

Consolidated Wonder   Apr 2020 - Mar 2021
Director of Engineering
- Scoped, designed, developed and analyzed PiP streaming of live streaming with multiple secondary camera outputs (Similar to UE Pixel Streaming)

Kuma Reality Games   Apr 2013 - Mar 2020
Game Programmer
- Server-client communication, remote debugging
- IP routing, firewalls, DNS, TLS/SSL, SSH
- Maintained version management infrastructure (SVN, Git) and CI / CD systems (Jenkins, JIRA, Bitbucket, Confluence)
- Backup and recovery strategies for MySQL databases, and RabbitMQ message broker

Tournament One Corp.   Dec 2010 - Mar 2013
Game Programmer
- Designed immersive and complex gameplay systems, libraries, and innovative UI solutions
- Simulated inelastic collisions, Perlin noise, and kinematics for projectile motion

OnlineWorlds.Org   Sep 2009 - Dec 2009
Intern
- Refactored legacy MUD title in collaboration with team members

AAA Games
- Planetside 2, Lord of the Rings Online, Dungeons and Dragons Online

TECHNICAL SKILLS

Languages, Rendering Techniques, and Graphics Technologies:
- C/C++, DirectX, OpenGL, HLSL, GLSL, PSSL, Win32API, DXGI, COM, Orbis OS, Graphics pipeline, Compute pipeline, Vertex Shaders, Geometry Shaders, Pixel Shaders, Compute Shaders, Signed Distance Field (SDF) text rendering

Software:
- Visual Studio, RenderDoc, NSight, PIX, Razor GPU/CPU, Git, SVN, Jenkins, Jira, Bitbucket, CMake, WinDbg, 3DS Max

Engines:
- Turbine G3, ForgeLight

PROJECTS

- Graphics Engine: Created a custom graphics engine, implementing forward rendering, culling, clipping, and .obj file parsing.
- 3D World: Developed a custom C++ graphics engine with DirectX and HLSL, featuring deferred rendering, a PBR workflow, advanced BRDF models (GGX, Smith geometry, Schlick Fresnel), and SIMD-optimized vector/matrix operations.
- VFX Particle System: Implemented confetti cannon and fire effects in C with OpenGL and GLSL.
- WebGL Borderlands Render: Created Gouraud Shading with Phong lighting rotating about a point light in a cylindrical coordinate system.

EDUCATION

Binghamton University, SUNY │ Bachelor of Science, Computer Science   Sep 2007 - Dec 2010
University of Colorado Boulder │ Advanced Computer Graphics (Graduate-Level Non-degree Course)   Jan 2015 - May 2015

RELEVANT COURSES

Advanced Computer Graphics, Linear Algebra, Calculus, Physics, GUI/Windows Programming, 3D Animation

MILITARY   Honorable Discharge
U.S. ARMY   9/99 - 9/02