

Mohamed Gadalla

C++ Developer specializing in Game Engine Development

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An accomplished C++ Developer specializing in game technology, build systems, and automation. Extensive experience in engine development, tools programming, and optimizing graphics pipelines. Strong problem-solving skills with a deep understanding of CMake, cross-platform builds, and debugging tools like RenderDoc. Adept at modernizing legacy systems and enhancing development workflows.

Work Experience

Freelance C++ Developer & Game Tools Engineer

06/2022 - Present

C++ Developer & Game Tools Engineer

- Assisted clients in upgrading legacy game SDKs and refactoring custom engines for modern platforms.
- Developed custom 3D model converters for proprietary formats, enabling compatibility with engines like Unity.
- Wrote extensive CMake-based build systems, transitioning projects from MSBuild to CMake for cross-platform compatibility.
- Automated deployment pipelines using Bash, PowerShell, and shell scripting, reducing manual effort for developers.

Projects

Nikola Engine (Custom Game Engine)

- A fully-featured and modular OpenGL-based renderer, supporting dynamic lighting, post-processing effects, deferred rendering, and using the GPU to render up to 1000 entities with almost no drop in frames.
- Designed a proprietary binary format for optimized asset loading, reducing load times by almost 40% across all assets (3D sound, 3D models, shaders, textures, and more).

Ymir (C++ Project Generator)

- Streamlined project setup processes, reducing development time by 50%.
- Including an easy-to-use GUI interface using ImGui and OpenGL.

Skills

- Bash
- C#
- C++
- CI/CD Pipelines
- CMake
- DirectX11
- Git
- Linux
- MSBuild
- OpenGL
- PowerShell
- RenderDoc
- Unity
- Vulkan
- Win32 API
- X11