

Mohamed Gadalla

C++ Developer specializing in Game Technology, Build Systems, and Automation

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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.
- Built automated testing tools for C++ game engines, improving stability and performance across platforms.
- Designed and implemented CMake-based build systems for complex C++ projects, modernizing legacy codebases.
- 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

- Developed a modular game engine supporting Direct3D11 and OpenGL for real-time rendering.
- Designed a cross-platform architecture targeting Windows and Linux systems.
- Designed a proprietary Nikola Binary Resource (NBR) format for optimized asset loading.

Ymir

- Built a project generator for Linux, featuring both CLI and GUI applications using C++ and ImGui.

Skills

- Bash
- C#
- C++
- CI/CD Pipelines
- CMake
- Cross-Platform Builds
- DirectX11
- Engine Development
- Git
- Graphics Pipelines
- JSON
- Linux
- MSBuild
- OpenGL
- PowerShell
- Python
- RenderDoc
- Shell Scripting
- Tools Programming
- Unity
- Visual Studio Debugger
- Vulkan
- Win32 API
- X11
- YAML

- Streamlined project setup processes, reducing development time by 50%.