

Charles Grassi

Graphics Programmer & Technical Artist

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PROFESSIONAL SUMMARY

Graphics programmer with **7+ years of experience** specializing in real-time rendering, shader development, and GPU optimization. Expert in Unity, Unreal Engine, and low-level graphics APIs. Shipped **100+ production shaders** and optimized rendering pipelines reaching **2M+ end users**.

70%

AVG PERF GAIN

100+

SHADERS

2M+

END USERS

15x

FASTER BAKE

12+

STUDIOS

PROFESSIONAL EXPERIENCE

Technical Artist & Graphics Programmer

Nexus Studios

Built real-time GI system using SDF for VR, achieving **90 FPS** on Quest 2 with **20+ lights**. Reduced baking from **45min to 3min (15x)**.

[Compute](#) [SDF](#) [VR](#) [GI](#)

Chief Technology Officer

SABDA

Led 16K 360° immersive installation across **6 servers** at **90 FPS**. Managed **64-ch spatial audio**, **2.5GB/s throughput**. Led **team of 8**.

[Projection](#) [Audio](#) [Leadership](#)

Lead Graphics Programmer

Little Red Dog Games

Led **4 engineers** developing VFX with compute shaders. **70% CPU improvement** (12ms → 3.6ms). Shipped **15+ effects**.

[Compute](#) [Burst](#) [VFX](#)

Senior Graphics Programmer

22cans

Created **25+ material shader library**. Grass system with **1M+ blades** at **60 FPS mobile**. Volumetrics with **sub-5ms GPU**.

[HLSL](#) [Mobile](#) [Volumetrics](#)

Graphics Programmer

Scapin' / The Sandbox

Custom lighting for **30+ lights** reaching **2M+ users**. Optimized blur **18ms → 4ms**. Built 8-layer parallax clouds.

[Lighting](#) [Mobile](#) [Web3](#)

Graphics Programmer

Ubisoft

AAA development: **20+ shaders** for PC/PS5/Xbox. **50% GPU reduction** while **2x particle count** to **100K+** at **4K 60 FPS**.

[AAA](#) [VFX](#) [Console](#)

TECHNICAL SKILLS

CORE

Unity, Unreal, C#, C++, HLSL, GLSL

GRAPHICS APIs

DX11/12, OpenGL, Vulkan, WebGL, Metal

UNITY

URP, HDRP, VFX Graph, Shader Graph

SPECIALIZATIONS

AR/VR, Compute, Niagara, GI, PBR

TOOLS

RenderDoc, NSight, PIX, Frame Debugger

LANGUAGES

English (Fluent), French (Native)

CLIENTS

Nexus Studios

Ubisoft

22cans

The Sandbox

DREST

H3 Space

Little Red Dog

SABDA

GN3RA

Lunchbox Ent.

Portfolio: Interactive demos & shader breakdowns at charlesgrs.github.io | artstation.com/charlesgrs