

# 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

2025

#### 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 6I

### Chief Technology Officer

2023-24

#### 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

2023

#### 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

2023

#### 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

2021-22

#### 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

2020-21

#### 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](https://charlesgrs.github.io) | [artstation.com/charlesgrs](https://artstation.com/charlesgrs)