

Macrae Smith

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SKILLS	PROFESSIONAL EXPERIENCE
Languages / API C++ • C# • HLSL • DirectX 11/12 • OpenGL • ImGui	3WAVES Charlottesville, VA Contract Jul 2026 - Aug 2026 VR Programmer and Technical Artist - Shipped a VR training demo in Unreal Engine and C++ on a fixed contract deadline to showcase a client's vestibular motion-platform hardware. - Simulated flight motion (banking, turbulence, sky parallax) in shaders instead of moving geometry, preserving headset tracking while reinforcing the platform's physical cues.
Software / Tools Unreal Engine 5 • UEFN • Unity • Maya • Blender • Git/Perforce • RenderDoc	The Devhouse Agency Dallas, TX Contract May 2024 - Oct 2024 Gameplay Programmer - Developed single-player and networked multiplayer gameplay for PC, VR, and mobile projects in Unreal Engine, UEFN, and Unity using Unreal Blueprints, Verse, and C#. - Developed gameplay for a shared-screen party game played on mobile browsers with a synced TV display, using deterministic UDP multiplayer.
Concepts Real-Time Rendering • Shaders and Materials • Procedural Generation • 3D Math • Profiling and Optimization • Multi-Threading • Gameplay AI • Networking	Kintsugi Interactive Remote Part-Time Jul 2023 - Sep 2024 Technical Artist and Gameplay Programmer - Co-founded an indie studio and ran Agile production meetings across art, programming, and design. - Designed and implemented shaders and gameplay for a 3D physics game in Unity.
EDUCATION	Soul Flare Remote Contract Feb 2024 - Aug 2024 Technical Artist - Developed a procedural animation system for a 3D narrative game using Unreal Engine's Control Rig and physics systems. - Created stylized HLSL shaders and VFX and integrated them with gameplay.
SMU Guildhall May 2026 <i>Master of Interactive Technology, Software Development</i>	
Samford Dec 2023 <i>Bachelor of Science, Game Design and 3D Animation / Computer Science</i>	

SHIPPED TITLES

Kila: Hourbound SMU Guildhall GameLab Team Size: 26	May 2025 - Dec 2025
Lead Programmer - Led 7 programmers through Agile production of a 3D RPG in UE5, running C++ and Unreal Blueprint code reviews and technical presentations to stakeholders. - Architected a melee combat system, with player-influenced combos, reactive physics, and dynamic animations. - Optimized graphics scalability across PC and Steam Deck, resolving performance bottlenecks to hold frame-rate targets.	
HardDriverz SMU Guildhall GameLab Team Size: 54	Feb 2025 - May 2025
Gameplay and Tools Programmer - Developed the dynamic 3D camera system for an arcade racer in UE5. - Implemented split-screen multiplayer, handling player connection and input.	

ADDITIONAL EXPERIENCE

C++ Engine	Aug 2024 - May 2026
- Solo-developed a 2D/3D C++ game engine from scratch, including physics, collisions, and raycasting. - Built DirectX 11 and DirectX 12 rendering pipelines with HLSL shader compiling, graphics memory and buffer management, and multi-threaded command list queuing.	
Procedural Generation and Rendering Techniques for Underwater Environments	May 2025 - May 2026
- Built a real-time underwater rendering showcase for my Master's thesis in my C++ engine, using custom multi-pass DirectX 12 rendering pipelines and graphics algorithms. - Wrote HLSL compute, vertex, and pixel shaders for water simulation, vegetation animation, and volumetric lighting. - Implemented particle rendering and GPU-driven instanced rendering for a fully procedural voxel world.	