

Connor Fitzgerald

Senior Graphics Engineer

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Job Experience

Senior Graphics Engineer - Full Time 📅 Apr 2025 – Present

Configura - NextGen Renderer

- Architected and implemented a cross-platform, GPU-driven renderer for the “NextGen” product.
- Translated open-ended executive direction into a researched, sequenced technical roadmap.
- Adjusted scope, technique selection, and execution order as prototyping surfaced platform and performance constraints.
- Presented progress, prototypes, and tradeoff decisions directly to the broader NextGen team and to the CEO.
- Balanced requirements from separate low-memory, high-fidelity, and high-performance use cases.
- Built a cross-vendor visual regression testing scheme covering native and browser execution.

Graphics Engineer - Contract 📅 Dec 2024 – Apr 2025

Mozilla - Firefox (WebGPU)

- Solved critical bugs blocking WebGPU’s release on Windows.
- Rearchitected DX12 sampler descriptor management, unblocking WebGPU on Firefox for most web applications.
- Triageed and resolved high-priority WebGPU issues reported by Firefox users and downstream wgpu consumers.
- Reviewed contributions from Mozilla engineers and external community members in the run-up to Firefox’s WebGPU launch.

Rendering Engineer - Contract 📅 Sep 2024 – Nov 2024

Let Eyes Equals Two - Minecraft Clone & UGC Browser Game

- Shipped a user-generated content game platform prototype in 12 working days as part of a four-person team.
- Fixed, debugged, and optimized the Rust/Vulkan renderer within a Minecraft-compatible game client.
- Upgraded shader infrastructure, porting GLSL shaders to the Slang shading language, filing key bugs upstream.
- Used ECS patterns to make modular and scalable game code.

Graphics Engineer - Full Time 📅 Jun 2022 – Sep 2024

Modyfi Inc. - Modyfi

- Built and shipped core infrastructure for a realtime non-destructive image manipulation webapp.
- Designed a system for generating ergonomic TypeScript/React bindings for a Rust/WebAssembly library.
- Took ownership of large system refactors to work around platform limitations.
- Built multiple testing solutions to ensure pixel-perfect accuracy when running on actual GPUs.

Memberships

Invited Expert *W3C WebGPU Working Group*

Worked alongside Google, Apple, Microsoft, and more to shape the WebGPU specification to be easy to use, powerful, and implementable. Brought my experience from building wgpu to improve the specification.

Open Source Experience

gfx-rs/wgpu 📅 Jun 2020 – Present

Lead Maintainer

- Lead maintainer of wgpu, the de facto Rust GPU library; powers Firefox and Deno’s WebGPU implementations and is used by Bevy, ruffle, and many others across the Rust graphics community.
- Review ~500 PRs/year, shepherding contributions from external developers through to merge.
- Lead the weekly maintainers meeting and provide first-line community support across chat channels.
- Serve as an architectural reviewer for cross-cutting changes, with the deepest end-to-end view of the codebase.
- Designed the GPU testing framework that gates correctness across hardware vendors and operating systems.
- Maintain CI running the test suite on every GPU API.
- Engineered resource state tracking infrastructure delivering up to 14x performance improvements.
- Built infrastructure for API extension support; implemented bindless textures.

Education

Hunter College 2017 - 2021

B.A. in Computer Science New York City, USA

Skills

Rust • C++ • Python • WebAssembly (wasm) • wgpu • Vulkan • D3D12 • D3D11 • Metal • OpenGL • WebGL2 • WebGPU • WGSL • HLSL • Slang • GLSL • ECS • Markdown

Tools

GitHub • GitLab • Visual Studio • VSCode • git • NSight • Radeon GPU Profiler • Tracy • Renderdoc • PIX • Claude • Codex • Copilot • Slack • Teams • Notion • HackMD