Bradley Padgett - Technical Artist

Portfolio | bradleypadgett@gmail.com | LinkedIn

Education

Texas A&M University | College of Architecture, College Station TX *2019 - 2023*

Visualization Major - Bachelor of Science

Mentorships

Epic Games *2022 - 2023*

Mentored by a Fortnite Tech Artist, focusing on forward/deferred rendering pipeline optimization strategies for principled shaders, and on coordinating data flow between Niagara FX, shaders, and gameplay systems.

Work Experience

LIVE Lab | Educational Game Development and Research Studio *March 2022 - May 2024*

- Partnered with Shell to create interactive digital facility representations through on-site client collaboration.
- Collaborated with A&M Forestry Service on interactive demonstrations of deforestation and flood stages.
- Created and documented shader pipelines/tools in Perforce, supporting workflows for 3D/research teams.

Recent Independent Projects *2023 - Current*

Whirlpool (Dynamic Ocean System)

Adapted the Gerstner wave formula to dynamically control wave speed and propagation at any world position. Integrated Niagara using shared HLSL and RVT data for synchronized splash and buoyancy positions along wave crests. Supports seamless spawning and blending of any amount of whirlpools.

Sail-Drifting Gameplay System

Leveraged Niagara's Grid2D Simulation Stages to dynamically bake collision query data into a localized render target, enabling tileable intersection masks for shaders and particle FX. Landscape and water shaders used the system to drive sand displacement and splash effects for sailing/drifting mechanics.

Stylized Principled Shader Pipeline

Developed two lightweight principled shaders for all assets, structured modularly using material attributes, functions, and instances. Focused on minimizing texture samples and shader instruction count, with platform-quality switches for hardware scalability. Also built Editor Utility tools to optimize mesh vertex counts and to streamline bulk-asset migration into the new stylized shader pipeline.

Stack (Editor Plugin) | stackplugin.com

Reverse-engineering Niagara's architecture and codebase to rebuild it into a generalized, stack-driven node framework for authoring tools and custom editors in Unreal Engine. Designed modularly using MVVM patterns, built to support systems engineers and technical artists creating extensible editor workflows.

Lantern Festival Cinematic

Built editor tools integrating Niagara with Procedural Content Generation tools, enabling precise control over lantern scattering and foliage set-dressing. Lanterns were modeled entirely in-engine, leveraging Substrate's BSDF-based shaders and MegaLights to drive thousands of optimized, fully dynamic lights.

Community Involvement

Judge for Chillennium Game Jam at Texas A&M *2024*

Served as a judge with industry professionals for the world's largest student-run game competition. Assessed game submissions on creativity, design, and technical execution while providing feedback to student developers.

Child Advocacy Game for Scotty's House *2021*

Collaborated with a non-profit and Brazos County Courthouse to design an educational courtroom simulation game for children; led project management, scripting, lighting, and repository management.