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 Technical Artist, focusing on forward and deferred rendering pipeline optimization strategies for principled shaders. Coordinated data flow between Niagara, 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 aiding workflows for development & research teams.

Recent Independent Projects *2022 - Current*

Stack | stackplugin.com

Reverse-engineering Niagara's architecture and codebase to rebuild it as 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.

Painterly Stylized Shaders

Developed two lightweight principled shaders for all assets, structured modularly using material attributes, functions, and instances. Focused on minimizing texture samples and shader instructions, 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.

Niagara Sailing FX

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 ripple effects. Also implemented Gerstner wave height sampling for splash FX, integrated alongside responsive sailing and drifting gameplay mechanics.

Lantern Festival w/ PCG

Built editor tools integrating Niagara with Procedural Content Generation, 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.

AWS Demo | C++ Dedicated Server

Built a scalable multiplayer system with AWS GameLift, Lambda, and DynamoDB to support reliable matchmaking, authentication, and persistent player data, enhancing performance and player experience.

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 critique 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.