Joan Dot Sastre

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Summary

A committed graphics programmer with 2 years of professional experience and 5 years dedicated to mastering the craft, having worked on the game "Continuum World" and another unreleased project. Skilled in shader programming, performance optimization, and 3D graphics. Eager to deepen my knowledge of lower-level APIs and contribute to innovative and visually stunning games. Passionate about open-source projects and refining my workflow.

Skills

Engines Godot, Unity
Coding C++, C#, GDScript, GLSL, Lua, Python
Tools Renderdoc, DAP, Git, CMake
Low level APIs Vulkan
Languages Spanish (native), Catalan (native), English (Cambridge C2 Proficiency)

Experience

Generalist/Graphics Programmer , Game Motion 2022 – 2023

- Developed a system for a 2.5D top-down game that constructs 2D procedural meshes. These are then processed by a shader which applies color, places decals, and transforms them based on view to simulate a 3D appearance
- Boosted performance of farthest LODs from an average of 26 fps to 60 fps using instanced rendering
- Created a system allowing screen space targeted shader effects through a mask buffer
- Developed shaders for elements including river water, different biome grounds, cloud backgrounds and game VFX
- Devised a tool for artists to create animated and cohesive prop variations using sprite selection, spatial transforms, and color shift constraints. It offers instant previews for any changes, allowing for a rapid creation workflow
- Developed a 2.5D parallax system using multiple billboartd sprite layers, which adjust their position and apparent distance based on camera tilt, zoom, rotation, and position

Junior Generalist Programmer, Ninju Games 2021 – 2022

- Worked on an unreleased project multiplayer implementation and port to Nintendo Switch
- Built 2D procedural map generation tools with shape, biome distributions, river placement parameters
- Created a system for prop placement and destruction, enabling world refill and spatial distribution according to GDD
- Implemented a multi-threaded asset manager for tracking, loading and fetching from both local and remote sources

Personal Projects

Marching Cloudscapes github.com/DinDotDout/marching_cloudscapes
Developed a raymarcher shader for a skybox, incorporating volumetric clouds, 2D high altitude clouds, and atmospheric scattering. Optimized to achieve a consistent draw time of 7 to 8 ms per frame. Provided customizable parameters for various cloud types and added drawable cloudscape maps for scenery building.

Godot Texture Composer github.com/DinDotDout/noise_texture_composer
Developed a tool to combine single-channel Godot noise or gradient textures into a multi-channel texture, reducing shader texture lookups and significantly optimizing shader performance.

Apprentice Binder github.com/andriybyelikov/apprentice-binder
Short 2.5D physics-based puzzle platformer card game where you use a hand of cards dealt to you to summon creatures that help you overcome obstacles and reach the end of a set of levels.

DOT (Procedural Planet Game/Editor) github.com/DinDotDout/dot
An interactive game featuring customizable procedural planet generation with randomized prop and enemy spawn. It includes four distinct biomes, variable planet sizes, and seed control. The game offers three distinct modes: tower defense, third-person sword combat, and space-ship flight and shoot.

Education

UIB – Bachelor's Degree in Computer Science 2021