Daniel Villicana

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Shipped Games

Hamster Ballin' *2026*

Game Designer

Directed game development team to create an arcade racer over the course of a 12 week period

- Programmed palette swap system that would allow character meshes to change between alternate colors and load this selection data during gameplay
- Aided programmers in writing systems that ranged from single point ball physics, PCG track systems, and kart racing game logic
- Led three teams of level designers, programmers, and artists to create an arcade kart racing game over the course of 20 weeks

Box Shot *Current*

Gameplay Programmer

Created several fully modular systems for designers to use and optimized both CPU and GPU performance.

- Programmed base enemy system using C++ in Unreal Engine that could dynamically be derived as blueprints to accomplish different behavior
- Created enemy stacking system that would allow enemies to stack on other enemies and follow their "parent" transform while keeping their original behavior
- Programmed supporting gameplay systems to aide in player experience such as aim assist and first person camera movements

Education

SMU Guildhall,

Masters of Interactive Technology in Digital Game Development *2025 - Current*

UC Riverside,

Bachelor of Science, Computer Science *2020 - 2024*

Work Experience

Student Aide(Systems Engineering),

Imperial Irrigation District *June 2024 – August 2024*

- Worked to automate power outage reports and corrected errors in existing documentation systems.
- Shadowed systems engineers in order to predict power outages based on power relay data.

Projects

Doomenstein

Doomenstein: GOLD was a project made at SMU Guildhall using my custom C++ engine. Doomenstein: Gold borrows systems from the original DOOM and Wolfenstein titles in order to create a short boss rush game. State machines are implemented to support boss behavior and a variety of bullet patterns.

NetChess3D

NetChess3D was a project made at SMU Guildhall using my custom C++ engine. NetChess3D uses a custom HLSL Blinnphong shader to implement a rudimentary lighting system as well as normal and sge map rendering. NetChess3D also features peer-to-peer TCP connection to play across different systems.

ButlerHell

ButlerHell was a project made at SMU Guildhall using my custom C++ engine. ButlerHell uses a button and menu system in order to recreate RPG menu navigation to support a combat encounter inspired by the game Undertale. Additionally, the game features a variety of bullet hell attacks controlled by a boss state machine.

Software

- Unreal Engine, Unity Engine
- Directx11
- Blender, Photoshop,
- .NET, React, AWS

Programming Languages

- C++, C#, Java, Rust, Lua, Rust, UE5 Blueprint
- HLSL, GLSL
- HTML, Javascript, Markdown

Links

Github:
https://github.com/VillicanaDaniel

Linkedin:
http://www.linkedin.com/in/daniel-villicana