

Carlos D. Gutierrez

Senior Software Engineer

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SKILLS & SOFTWARE

Core Skills

- Software Engineering
- Project Management
- Agile Development
- AI/NPC Development
- Game Design
- Linear Algebra

Languages

- C++
- OpenGL & GLSL
- C#
- Unreal Engine 4/5 Blueprint
- Lua
- Python

Software

- Unreal Engine 4/5
- CryEngine
- Perforce
- Visual Studio
- Jira
- 3DSMax SDK

PROFESSIONAL GAME DEVELOPMENT EXPERIENCE

UNANNOUNCED PROJECT (Online Multiplayer FPS) – **Deviation Games** – Los Angeles, California

Current Work

Senior AI/Gameplay Engineer

Unreal Engine 5

- Owned and implemented NPC Behavior Action System
 - Governs how all NPCs behave when spawned, scripted, or in reaction to stimuli and game state
 - Written in an expressive and easy to understand format with a data driven front end and visual debugger
 - Allows programmers and designers to implement and use behaviors through Blueprint or C++
 - Enables combining and prioritizing of existing implemented actions to rapidly implement new NPC behavior sets
 - Closely collaborated with designers to rapidly iterate based on evolving needs of system and their feedback
 - Elegantly handles both systemic behaviors and designer scripted behaviors as well as transitions between the two
 - Created system proactively instead of continuing iteration on existing systems that weren't working for games needs
- Collaborated with third party vendors, integrating their updates, setting direction for next deliverables, testing changes
- Implemented NPC abilities with Gameplay Ability System, including logic, animation/VFX hookups, and gameplay cues
- Implemented jumping and ledge drop navigation and pathing for NPCs
- Primary owner and point of contact for several unique NPCs different locomotion, body types, behaviors, and more

PREY MOONCRASH (Immersive Sim Roguelite DLC) – **Arkane Studios** – Austin, Texas

June 2018

AI/Gameplay Engineer

CryEngine

- Owned and implemented all behaviors and abilities for new NPC - the Moonshark
 - Implemented systemically blind NPC that senses players who make noise or step on the Moon's surface
 - Developed underground pursuit movement and above-ground emerge and attack movement
 - Implemented all abilities, include ground slams and levitating/throwing physics enabled boulders
- Primary point of contact and owner of programming needs for all remaining NPCs

PREY (Immersive Sim) – **Arkane Studios** – Austin, Texas

May 2017

AI/Gameplay Engineer

CryEngine

- Collaborated with designers and producers to establish feature requirements, set deliverables, and iterate on features
- Primary owner and point of contact for programming needs related to Phantoms, Technopath, Weaver, and Human NPCs
- Owned and implemented numerous core NPC behaviors, including Combat, Search, Hunt
- Implemented behaviors and special attributes for Phantom, Mimic, Technopath, Telepath, Human, Weaver, and Nightmare
- Developed and owned combat abilities and ability logic for all NPCs
- Owned and implemented Combat Role Manager to manage multiple NPCs roles fighting a target
- Owned and developed Unreachable Targeting System - finds attack position when target moves to an unreachable location
- Added hotloading and multi-select functionality to CryEngine Library editor, improving designer iteration time
- Implemented numerous scripting and behavior interfaces for designers to use when scripting NPCs
- Set up interfaces and integrated work from other departments (such as animation, sound, VFX) into NPCs
- Guided ramp-up for new contractors learning NPC behavior, perception, special attribute, and ability systems

EDUCATION

Masters of Interactive Technology - The Guildhall at Southern Methodist University, Plano, Texas

January 2014

Specialization in Software Development

- Thesis: *Fuzzy Fitness Scoring for Companion AI Strategy Selection*
- Capstone Team Game Project Role: Game Designer
 - Selected to be Creative Lead for project and facilitated overall game vision to team of 15 other students

Bachelors of Science in Computer Science - Southern Methodist University, Dallas Texas

May 2012

Honors in Liberal Arts