**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