



SHANTANU SHRIPAD MANE - CHARACTER PROGRAMMER

Phone No.: +1-385-202-9752 | Email: shantanu.m934@gmail.com
Portfolio: shantanumane.com | linkedin.com/in/shantanusmane

EDUCATION

University of Utah, Salt Lake City, USA - May 2019

Secured a Master of Entertainment Arts & Engineering - Game Engineering Track with GPA 3.88/4.00

K.J. Somaiya College of Engineering, Mumbai, India - June 2015

Secured a Bachelor of Engineering in Computer Engineering with *First Class Honors*

SKILLS

Programming Languages - C++, C#, Blueprints, Lua, GLSL

Software - Unreal Engine 4, Unity, Maya, MotionBuilder, OpenGL

Soft Skills - Iteration, Collaboration, Creative Problem Solving

Computer Science - 3D Math, Data Structures, Animation Programming, Memory & Cache, Algorithms, Code Optimization & Architecture

WORK EXPERIENCE

SIE Santa Monica Studio, Los Angeles, USA - Gameplay Programmer Intern - C++, C#, Lua - Jul '19 to Sep '19

- ◆ Implemented a root-motion related animation tool feature to make viewing animations in game more convenient.
- ◆ Improved a combat collision system to perform more accurate shape intersection tests to better support designers' vision.
- ◆ Optimized a fact-checking system to keep certain types of fact buckets pre-sorted and sort other fact buckets only when necessary which saved 0.2 - 0.3 ms of frame time.

Actually A Game Company, Salt Lake City, USA - Character & Gameplay Programmer - C++, Blueprints, UE4

Hard Light Vector - Sep '18 to May '19 - [Released on Steam](#) Mar '19 - [Portfolio Page](#), [Project website](#)

An action-adventure FPS game with your fast-paced traversal techniques as tools to conquer giant mechanical monsters.

- ◆ Implemented & iterated on the player character's 'Thrusters' that give a small upward boost when you are in-air.
- ◆ Implemented an action-elements system to control VFX and screen effects for flair & feedback based on player state.
- ◆ Worked on an interaction system to indicate and handle interacting with interactable elements near the player.
- ◆ Implemented the HUD and various UI elements to achieve a sci-fi feel and power fantasy.
- ◆ Contributed to player-side design to create a unique character and resonating abilities that make you feel fast and fierce.

GAME PROJECTS

Combo Attacks System Project - Character Programmer - C++, UE4 - Aug '18 to Present - [Portfolio Page](#)

- ◆ Created a gameplay and animation system for chain attacks/combos based on input timing, animation events & branches which is robust enough to allow adding any number of combat moves by designers and chaining between them.
- ◆ Improved responsiveness by accepting next attack input before an attack finishes and later executing the 'Pending Attack'.

Warlocks - Character & Gameplay Programmer - C#, Unity - Aug '18 to Dec '18 - [Portfolio Page](#)

A recreation of a MOBA-esque King-of-the-Hill PvP where you cast spells to fight and defeat other players.

- ◆ Created a controller system to switch input actions (select, move, target, cast) & handle character states for each action.
- ◆ Implemented movement status effects like Stun & Knock-back for spell interactions with characters.
- ◆ Implemented a well-rounded spell system with ability interactions & spell target types, levels, cast times & cooldowns.
- ◆ Created robust Unit Statistics, Damage and Status Effects systems and pipelines.
- ◆ Optimized spells' Game Object creation by instantiating into Object Pools before game start rather than during gameplay.

2D Collision System - Gameplay Programmer - C++ - Feb '18 to May '18 - [Portfolio Page](#)

- ◆ Created the Collision & gameplay supporting systems for a 2D Game Engine and implemented Pong using it.
- ◆ Implemented the Swept Separating Axis Test for collision checks, and two types of responses to them - block & overlap.
- ◆ Optimized collision system by updating coordinate transformation matrices only for moveable objects, checking collision of only the ball with other objects & responding to only the earliest collision, capitalizing on the game world being sparse.
- ◆ Created libraries of 4x4 Matrix & Vector4 operations for transformations used primarily by collision system.