



SB

SIDDHANT BHATI

GAME ENGINEER (C++) |
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OBJECTIVE

Game Engineer with 4+ years of experience, proficient in C++ and Game AI seeking for an opportunity that keeps him entangled with challenges

SKILLS

C++, AI, System Design, Data Structures and Algorithms, Math, Unreal, Lumberyard, Unity, DirectX, GTest, stl, boost, python

EXPERIENCE

C++ UNREAL ENGINE DEVELOPER – JUNE 2022 – PRESENT

MAYHEM STUDIOS – BANGALORE, INDIA

PROJECT : UNDERGROUND GANG WARS(AAA GAME). RESPONSIBILITY TO BUILD THE BOT SYSTEM FOR BATTLE ROYALE GAME IN UNREAL. SYSTEMS LIKE TAKE COVER, SHOOT FROM COVER, REVIVE, INTEGRATING CHARACTER WEAPON SYSTEM WITH BOTS, EQS, HANDLING BEHAVIOUR OF BOTS USING BEHAVIOUR TREES + STATE MACHINE, HANDLING BEHAVIOUR OF BOTS IN DUO AND SQUAD MODE. RESPONSIBILITY IN DEVELOPING NEW FEATURES ON THE BACKEND, G-TESTS ETC.

C++ UNREAL ENGINE DEVELOPER – SEPTEMBER 2021 – MAY 2022

FREELANCER

PROJECT: WORKING ON SETTING UP THE BACKEND FOR AN RTS GAME AND AI DEVELOPMENT OF MOBA GAME. HANDLING CORE AI FEATURES USING BEHAVIOUR TREES, BLACKBOARD, CHARACTER SPELL DEVELOPMENT.

GAME ENGINEER C++ - JULY 2020 – SEPTEMBER 2021

PRAGMATIC PLAY - Noida, India

PROJECT: FANTASTIC LEAGUE 2021(FOOTBALL FANTASY LEAGUE- AI VS AI)

RESPONSIBILITIES: To reverse engineer the legacy Fantastic league 2005 to Lumberyard, port the legacy engine from VS2005 to VS2017 for debugging purposes, implementing a byte code reader to fetch the data in binary format and to organise the data by understanding legacy project's architecture, to implement custom gem for player animation which involves custom blending, switching motion by passing name in parameters, to implement legacy's ball physics in Lumberyard

Major accomplishments:

Custom Animation Gem increasing efficiency and saving time by 200%

Legacy Renderbox ported to VS2017

C++ GAME DEVELOPER - FEB 2019 - MAY 2020

INGENUITY GAMING - Noida, India

Core responsibilities in building slot games engine for casino machines. implementing state machines to handle the flow of game math and front end, implementing automated module for setting up different animations on screen, to build an interface for data management of the game

Major accomplishments:

Automated module to handle animations on screen through xml

EDUCATION

BSC(H) IN COMPUTER SCIENCE 2015-2018

**BHASKARACHARYA COLLEGE OF APPLIED SCIENCES, DELHI
UNIVERSITY - DELHI, INDIA**

PERSONAL PROJECTS

HOTLIKE MIAMI

A Top Down 2D game AI built from scratch up on C++ using SFML for rendering.

Highlights:- Implemented the game loop, asset manager, state machine for Game states, system for setting up the game level through text files.

Implemented MathCalculator responsible for all the math required for the simulation, collision detection for circle-line, rectangle-circle, line-line etc

Implemented A* Pathfinding algorithm, MessageBus system using Data oriented Design

Implemented the state machine for a very complex AI behaviour of the enemies. The enemy has the ability to analyze and take actions according to a situation in the game. It can take cover and shoot with respect to player's position, revive friend when it's almost dead, dodge grenades, ability to react to a surrounding (consuming poisonous sandwich and running to toilet later), choosing not to go to pick a gun if bare handed and the gun is in danger zone etc

The motive is to make the enemy think like human, this brings a lot of variation in the game depending on the situations (inspired from Hitman's AI)

Collision Detection Optimization

Handling collision detection of 6000+ shapes using Quadtrees, Spatial Hash, Entity Component System, SIMD.

Link to my Portfolio - <https://skiggs.github.io/website/Index.html>

Other Projects:- Unreal Engine Behavior Tree and blackboard(using c++), Unreal Engine multicasting and replication, Character Controller for procedural animations using IK and Control Rig(Unreal Engine 4), Endless Runner Game(Unreal Engine), Simple ML agent in c++, AI system for NPCs using navmesh (Unreal Engine)