

# AZHAR SIDDIQUI

## GAMEPLAY PROGRAMMER

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🏠 Open to relocation

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🐙 GitHub

📁 Portfolio

## TECHNICAL SKILLS

### Programming Languages

C#	Java
C++	JavaScript/TypeScript
C	Python

### Game Engines

Unreal Engine 4	Phaser 3
Unity	MonoGame

### Others

UE4 Blueprints	VR Development
3D Math	Adobe Photoshop
Visual Studio	Mobile Development
Git	Web Development
Perforce	Jira
Microsoft Office	React Native

## SOFT SKILLS


Critical Thinking	Decision Making
Problem Solving	Conflict Management
Verbal Communication	Collaborative
Written Communication	Optimism
Active Listening	Divergent Thinking
Integrity	Commitment

## EDUCATION

**University of Utah (Current)** *MAY 2021*  
MS in Entertainments Arts & Engineering

**University of Wisconsin-Madison** *MAY 2019*  
BS in Computer Sciences

## PROJECTS

**Movement Algorithms**  *MAR 2021*  
**Solo Developer | Visual Studio, openFrameworks Application, C++ | 4 weeks**


- A C++ AI class project focused on simulating numerous kinematic and dynamic movement behaviors
- Implemented seek steering and wander steering behaviors
- Created mechanism to blend multiple dynamic behaviors together
- Implemented flocking behavior using blending of other dynamic behaviors

**Souls of the Wind** *OCT 2020*  
**Gameplay Programmer | Unreal Engine 4, PC, Thesis, C++ | 28 weeks**

- A 3D puzzle-adventure that uses wind as a mechanic to clear out corruption in the world. This is an ongoing project that will be published on steam by May 2021
- Implemented a wind gust mechanic that shoots 3 different kinds of wind projectiles to interact with environmental objects in different ways
- Added default reactions for the 3 different kinds of gust projectiles
- Implemented a framework for being able to define custom gust reactions on particular environmental objects that trump default reactions for each kind of gust projectile

**Welcome To Earth** *FEB 2020*  
**Gameplay Programmer | Unreal Engine 4, Alt-Ctrl, C++ | 16 weeks**


- A 2.5D sci-fi puzzle-platform side scroller that makes use of an alternative controller for player movement
- Implemented abduction/hover mechanic for interaction with all world objects
- Created an enemy boss AI used in a fast-paced chase sequence
- Setup and integrated alt controller to allow player movement using proximity sensors

**Monster Chase**  *JAN 2020*  
**Solo Developer | Visual Studio, Windows Desktop Application, C++ | 20 weeks**

- A C++ game programming class project focused on creating a custom game engine to develop a simple 2D game
- Created a physics system operating on the concept of conservation of momentum and matrix calculations to simulate real-life physics
- Created a collision system to handle collision detection and collision response among multiple in-game objects simultaneously
- Implemented a job system that handles rendering of in-game objects on different threads
- Added functionality to load and run JSON file data in-game

**Chroma Meleon Remastered** *DEC 2019*  
**Gameplay Programmer | Unreal Engine 4, PC, C++ | 2 weeks**

- A 3D arcade platformer prototype focused on PvP experience
- Implemented a wall run mechanic allowing for player to traverse entire level.
- Added split screen functionality to allow for local multiplayer
- Implemented several powerup abilities and integrated them with the HUD
- Implemented functionality to use single key input for movement

**Heap Allocator**  *SEPT 2019*  
**Solo Developer | Visual Studio, Console App, C++ | 2 weeks**

- A C++ Game Programming class project
- Implemented in C++ to mimic the functionality of malloc (including alignment) and free using a doubly linked list

## EXPERIENCE

**The Gapp Lab** *JAN 2020 - PRESENT*  
**Lead Software Engineer | Unity, PC, VR, Mobile, C#**

- Worked on an Oculus Rift and PC simulation aimed at creating an interactive home environment to supplement training of social work students and social workers in the field
- Worked on an Android mobile application that presents motivating interviewing curriculum with feedback and rewards to train social workers with better communication skills