# **SALEM RICHIE** GAMEPLAY PROGRAMMER

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# **ACADEMIC PROJECTS**

#### Al Programmer | Technical Lead

Aug 2023 - Present

Cats & Critters: A Dungeon Claw-er — Multiplayer Party Adventure Game

- Founded a nine-person team to develop an approachable multiplayer party game using the Unity Engine
- Authored a utility-based Al system by implementing response curves to support flexible multiplayer scenarios
- Implemented AI navigation throughout procedurally-generated levels using dynamic navigation meshes
- · Compile weekly development builds and conduct technical production meetings to maintain project momentum

#### Systems Programmer | Technical Lead

Oct 2022 - Apr 2023

Inline: Out of Time — Time-Attack Action Platformer Game

- Supervised six engineers on a twelve-person team to develop and ship a custom C++ game to Steam
- Designed algorithms to optimize level geometry and collision detection resulting in a 26% framerate increase
- Developed a physics system alongside designer goals for player movement to best allow parkour-style action
- Created tools and asset standards for the level content pipeline to enable efficient design and art iteration

#### **Physics Programmer | Level Designer**

Jan 2022 - Apr 2022

Nowhere to Grow — Physics-Based Puzzle Platformer Game

- Collaborated on a team of six engineers to create and design a complete game in C across four months
- Implemented an object management system using custom data structures to manage memory resources
- Simulated physical properties such as mass and restitution to calculate impulse forces and resolve collision
- Designed game mechanics and puzzles to showcase physics simulation through player interaction

# **EDUCATION**

#### **Bachelor of Science in Computer Science and Game Design**

Expected: Apr 2025

DigiPen Institute of Technology — Redmond, WA

• GPA: 4.0

#### Associate of Arts in Liberal Arts

May 2020

Northeast Lakeview College — Universal City, TX

GPA: 4.0

#### ACADEMIC ACHIEVEMENTS AND AWARDS

DigiPen Institutional Full-Tuition Grant	Jul 2021
8 Bits to Infinity Text-Only Game Jam Community Choice Award (of 28 Entries)	Dec 2019
SoHacks 5 Hackathon "Best Intermediate Hack" Award (of 85 Entries)	Aug 2018

## PROFESSIONAL EXPERIENCE

Resident Assistant Apr 2023 - Present

DigiPen Housing, L.L.C.

Conference Associate Mar 2024

Game Developers Conference (GDC)

### Teaching Assistant | C++ and Game Engine Architecture

DigiPen Institute of Technology

Sep 2022 - Jul 2023

# **SKILLS**

# Development

- iii Laiigua(
- Data Structures
- Game Engine Architecture

Algorithm Analysis/Design

# Languages

- Advanced C/C++
- C#
- Python

#### **Tools**

- Microsoft Visual Studio
- Unity Engine
- Git Source Control