

# DUSTIN SIMPKINS

614-886-1990 | dustinasimpkins@yahoo.com | Columbus, OH 43221

## PROFESSIONAL SUMMARY

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A dedicated student at Shawnee State University specializing in **game development** and **programming**, with expertise in **particle systems**, **graphical effects**, and **artificial intelligence (AI)**. Skilled in **Python**, **C/C++**, **SQL**, **Unreal Engine**, and **Godot**, with a proven ability to **collaborate with artists** and **problem-solve** with other programmers to create dynamic environments and intelligent enemies. Demonstrated experience through participation in eight game jams, including the development of an enemy AI that responds to **visual and audio stimuli** and utilizes multiple states to authentically interact with its environment and the player. Seeking a hands-on, real-world, experiential opportunity to further enhance technical skills in **simulation and game programming**.

## EDUCATION

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**Shawnee State University** – Portsmouth, OH Expected Graduation: May 2025  
Bachelor of Science in Simulation and Game Programming

## PROJECTS

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**Shrouded Ascent** January 2024 – Present  
Senior capstone project in Digital Simulation, developing a third-person stealth puzzle game in Unreal Engine.

- Lead designer for enemy mechanics, creating complex AI behavior trees and advanced seeking behaviors using the environmental query system.

**Protect the Pure** January 2024 – April 2024  
Junior-level project to create a top-down survival game in Godot.

- Developed visual effects such as particles, shaders, fog, and lighting.
- Contributed to gameplay mechanics, including spell costs and functionality, and pitched the original game concept.

**Godot Particle Presentation** December 2023 – March 2024  
*Personal research project exploring advanced particle systems in Godot.*

- Presented findings publicly at Shawnee State University, covering nuances of Godot's particle systems.

**Judo Space** January 2022 – April 2022  
*A freshman-level semester project creating a 2D fixed-shooter arcade game with fighting elements using PyGame.*

- Designed player controls and mechanics, including blocking, parrying, dashing, and shooting.
- Implemented a collision detection framework to handle both circle and polygon collisions

## HIGHLIGHTED COURSEWORK

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**Concurrency:** Developed projects utilizing multiprocessing, threads, and countermeasures like locks and semaphores to explore concurrent systems' uses and risks.

**Networking & Communications:** Created low-level communication systems between microprocessors with Raspberry Pi Pico W and Arduino; built web applications with hyperlinks, images, and text.

**Optimization:** Used SSE and AVX intrinsics to create optimized SIMD code for image, sound, and graphics processing.

**Automata & Formal Languages:** Applied computational automata theory, including the Myhill-Nerode theorem, to optimize DFAs in Python.

## WORK EXPERIENCE

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### Tutor

Shawnee State University – Portsmouth, OH

October 2023 – December 2023

- Tutored students in Ethics in Public/Private Life courses.

### Customer Service Associate

Lowe's Home Improvement – Hilliard, OH

May 2023 – August 2023

- Provided customer service in the outside Lawn and Garden section.

## VOLUNTEER EXPERIENCE

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### Conference Assistant

Shawnee State University – Portsmouth, OH

November 2023

- Volunteered as a floor and booth assistant.

### Camp Counselor

Franklin County 4-H – Columbus, OH

January 2022 – June 2022

- Managed a cabin of 11 campers and one Counselor-in-Training.

## AWARDS & RECOGNITION

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### SSU President's List

Awarded: Fall 2021, 2022, and Spring 2022, 2023, 2024

- Recognized for achieving a 4.0 GPA each term, demonstrating academic excellence and dedication to coursework.

### National Association of Collegiate Esports | Academic All-NACE

Awarded: 2022

- Honored for maintaining a high GPA while actively participating on the SSU esports team, reflecting a balance of academic and competitive commitment.

### Eagle Scout

Awarded: April 2020

- Achieved the rank of Eagle Scout through Troop 200, showcasing leadership, discipline, and commitment.

## REFERENCES

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## **Jason Witherell**

Professor, Shawnee State University

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