

# GREGORY ALLEN

GAMEPLAY PROGRAMMER

[LINKEDIN](#) [GITHUB](#) [PORTFOLIO](#)

## CONTACT

**Phone**  
941-585-2258

**Email**  
traquanallen.gtta@gmail.com

**Address**  
Orlando, FL 32826

## SKILLS

### Programming Languages

- C
- C++
- C#
- HLSL
- Java
- Python
- 68K Assembly

### Tools

- Unity
- Unreal
- Blender
- Jira
- Trello
- Git
- Perforce
- SDL
- Direct X11
- Confluence

### Database Management

- MySQL
- PostgreSQL

## EDUCATION

**University of Central Florida**  
Florida Interactive Entertainment Academy  
Masters of Science, Interactive Entertainment  
Graduation Date: 2023

**University of Central Florida**  
Bachelors of Science, Computer Science  
Minor, Math  
Certification, Cyber Operations  
Graduation Date: 2022

## PROJECTS/EXPERIENCE

### [Supporting Woman's Advancement in Gaming, Anna's Ascent](#) [Gameplay Programmer](#)

Sept '23 - Present

- Female-led development team creating a horror game demo: Anna's Ascent.
- Play as Anna, a Finnish paramilitary member of the Lotta-Svard Association during the Continuation War. Separated from your mushing dog Valo, experience the horrors of Finnish purgatory in the tunnels of the Salpa Line.

### [Get in the Box Studios, Deckweaver: Descent into Chaos](#) [Gameplay Programmer](#)

Aug '23 - Present

- Capstone Project with a team of 32 developers composed of artists, programmers, and producers.
- Handled bugs fixes in enemy behavior in terms of enemy grouping on attack and making boss mechanics for melee combat and player proximity knockback.

### [Three Owls In a Trenchcoat, Bloodsong: Call of the Siren](#) [Gameplay Programmer](#)

Jan '23 - Present

- Capstone Project with a team of 21 developers composed of artists, programmers, and producers.
- Assisted tech designers with implementing puzzle mechanics for Project Aqua: Bloodsong.
- Designed the AI behaviors for the enemy types in the project; behaviors included player sensing, attacking, retreating, player stuns, and implementation of animations.

### Squad-Based AI Coordinator

May '23 - Aug'23

- TPS-style squad based AI manager system that controls a squad of enemy behaviors intelligently and reactively to elevate gameplay experience.
- Enemy types supported include regular enemies that shoot projectiles, enemies with healing abilities, enemies with sniping capabilities, and enemies that can both crouch and flank.
- The Enemy AI coordinator utilizes Unreal's environmental query system to recognize environmental data and communicate between squads through verbal cues and time-based message validity passed between members of the squad.

### FIEA Game Engine

Jan '23 - Apr '23

- Custom Data-Driven Game Engine which has the capability to parse through JSON data at runtime to create user-defined class structures and instances
- Implemented programming Design patterns include Abstract Factory, Observer Pattern, Composite, Singleton, and Chain of Responsibility.
- Created Custom containers: Singly linked list, Vector, HashMap, and Datum.
- Tested project functionality by utilizing MS Unit Test Framework.

### Space Invaders

Dec '22

- Clone of the classic 2D game, Space Invaders, implemented in C++ by utilizing the Simple and Fast Multimedia Library for rendering and gameplay mechanics.

### Butterfree Ambush

Oct '22 - Nov '22

- An Arcade-Style Endless Flying Game developed in Easy 68k assembly, in which the player controls the Pokemon 'Butterfree' and must avoid several incoming enemy Pokemon.
- Handled user input control of Butterfree, drew from a bitmap file to render the background and game objects, simulated physics on Butterfree, created/updated a seven segment LED display as a HUD, detected collisions between Butterfree and enemies, and spawned enemies randomly using fixed-point math.

### Particle Swarm Simulator

Mar '22 - Apr '22

- Particle simulator designed utilizing Simple and Fast Multimedia Library to create and display swarms of particles in predetermined patterns.
- Utilizes a polar coordinate system to direct particle movement and direction in order to achieve swirling effects.

## CAMPUS INVOLVEMENT

### UCF Student Union Event Services, Event Manager

Jan '21 - Present

- Coordinated Registered Student Organizations, VIP event setups, and facility turnover to ensure quality customer service.
- Led teams of Event Service Associates and handled delegation of tasks for on-shift employee during each venue's setup.

### Theta Tau,

Jan '20 - Present

### Philanthropy Board Member & DEI Committee Member

- Planned and implemented discussions within the fraternity to expose members to topics in diversity, equity, and inclusion; topics included authenticity in the workplace, being an ally to marginalized groups, and handling impostor syndrome, to name a few.