

# KAELA O'NEILL

A.I. FOR GAMES  
PROGRAMMING & DESIGN

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## SKILLS

- Artificial Intelligence
- Enemy, Companion, & NPC A.I.
- Gameplay Programming
- 2D & 3D Pathing/Behavior
- Debugging Tools
- UI/UX Architecture
- Technical Documentation
- Native C++ & Blueprints in Unreal

## SOFTWARE

- Unreal Engine 5 (UE5)
- Unreal Engine 4 (UE4)
- Unity Engine
- Perforce
- Rider
- Visual Studio

## LANGUAGES

- C++
- Unreal Blueprints
- XML
- C#
- HTML/CSS
- Java
- Python



## GAMES

### Project Sirius

CD Projekt Red  
A.I. Programmer - Unreal 5  
June '22 - May '23, Jan '26 - Present

- Multiplayer game in The Witcher universe
- Worked with designers to create tools for tuning combat, adding new behaviors, adjusting pathing patterns, and debugging AI logic
- Extended and utilized many AI systems, both UE5 and proprietary, such as: perception, 2D and 3D movement, nav mesh generation, EQS, and spawners
- Implemented custom behavior tree features and multi-character managers

### Unannounced Project

ArenaNet  
A.I. Programmer - Unreal 5  
June '23 - Jan '26

- Utilized Environmental Queries to leverage utility in AI decisions - where to move, which target to focus on, what action to perform, what prop to use, etc.
- Iterated on proprietary state machine, smart object, & attack token systems
- Used GAS abilities, tasks, and notifies to give designers tools to freely create animation-based actions

### Eklektos

Sole Developer - Personal C++  
Engine  
August '21 - May '22

- Utility theory based NPC A.I., developed for Master's degree
- Created a utility system for decision making, scheduling, and socializing
- SmartObjects and SmartAreas store behaviors for A.I. to request & claim
- Villagers & SmartAreas generated Gaussian randomness or defined with XML data; roads generated with A\*
- Implemented DearImGui to display information and create utility graphs

### Familiars

Sole Developer - Personal C++  
Engine  
February '22 - May '22

- 2D witch themed role-playing game; ft. inventory system, potion making system, and a communicative companion AI
- Implementing/experimenting with Natural Language Processing for an RPG

### Agryos: Recovering Eden

A.I. Programmer - Unreal 4  
August '21 - Dec. '21

- Third person sci-fi bullet hell, made by a team of 16. Available on Steam!
- Developed 100% of combat A.I. using behavior trees and modular design
- Implemented player, A.I., and FX animations using blendspaces and Niagara
- Assisted primary U.I. programmer with tasks such as ultrawide display support
- Localized for multiple foreign languages and developed the checkpoint system

## OTHER PROJECTS

### Project Lead

ELine Media  
May '21 - Sept. '21

- Implemented game mechanics and player controller using C# in Unity
- Wrote documentation (GDD, art guide) and wrote tasks for sprint planning
- Hosted weekly development livestreams to engage and teach participants

### Technical Writer

Endless Studios  
Aug. '20 - May '21

- Wrote & designed educational content about coding and game design
- Playtested and assisted lead designers with levels in play-to-learn games
- Perform audits on user flow for game pages and updated website

## EDUCATION

### SMU GUILDHALL

2020 - 2022 | Master of Interactive Technology - Software Development

### ALBRIGHT COLLEGE

2016-2020 | Computer Science & Digital Media - Double Major