KAELA O'NEILL

A.I. FOR GAMES
PROGRAMMING & DESIGN

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www.kaela.dev

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 Moon

ArenaNet
A.I. Programmer - Unreal 5
June 2023 - Present

- Utilized Environmental Queries to leverage utility in many 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

Project Sirius

The Molasses Flood/CD Projekt RED
A.I. Programmer - Unreal 5
June 2022 - May 2023

- Multiplayer game in The Witcher universe, codenamed *Project Sirius*
- Implemented custom behavior tree features such as semi-random subtree injection and pre-execution branch cooldowns
- Planned & implemented multi-character managers for life sim NPCs & enemies
- 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
- Worked in pure native C++, pure blueprints, or combined, per designer requests

Eklektos

Sole Developer - Personal C++ Engine
August 2021 - May 2022

- 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 2022 - May 2022

- 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 2021 - Dec. 2021

- 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 2021 - Sept. 2021

- 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. 2020 - May 2021

- 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