

Kenechukwu Umelo | AI & Systems Programmer

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PROFESSIONAL EXPERIENCE:

King Crow Studios | Programmer II

Mar 2022 - Dec 2023

B52-VRTP

- Successfully transitioned the existing project to use the new XR plugin tool, expanding support for more headsets.
- Revamp all interactable UI logic with a custom interactable script to support touch features.
- Implemented multiplayer logic to synchronize event calls and positions for 20+ GameObjects.
- Implemented over 10+ new training simulations to train for specific areas of the aircraft.
- Fixed recurring bugs from post-playtesting sessions to maintain high quality and polish.

Unreleased Multiplayer Project

- Programmed several gameplay mechanics and 5 minigames from concept to completion.
- Worked on several settings options, including audio input/output, volume mixers, and in-game player tracking.
- Build an NPC creation tool in Unity, reducing NPC implementation time by 30%.
- Collaborated closely with engineers to implement and iterate on multiplayer systems.
- Developed debug tools covering progression on mini-games and player traversal points, improving playtesting time.

Lucid Dream | Unity Programmer

Aug 2021 - Feb 2022

Confidential Projects

- Implemented various XR interaction systems for training experiences on Meta Quest using Unity and C#.
- Collaborated with senior engineers to iterate and extend features on proprietary XR systems to support client-requested work.
- Debugged and polished several AR applications and mobile games utilizing Xcode and Android Studio.

Healthy Holidays

- Led the 5-week development cycle, from concept to completion to shipping to PC and mobile devices.
- Implemented the core sequence matching and round systems.
- Programmed custom orbs exposing audio, SFX, VFX, and animation variables to allow for content creation.

PROJECTS:

Flocking Behaviors Demo — Technical Showcase — AI Programmer — Solo Project — Unreal Engine

- Built a boids system inspired by in Unreal C++, implementing behaviors such as Alignment, Cohesion, and Separation.
- Implemented custom obstacle avoidance logic utilizing dot product and line tracing to constrain the angle of view.
- Crafted the Boids Manager to allow for custom boundaries and behaviors to be tweaked in different scenes.

Lunchroom Rumble 3D — Arena Brawler — AI Programmer — Solo Project — Unity

- Prototyped a single-player arena brawler featuring a dynamic UI leaderboard, custom player controller, and AI systems.
- Built detection systems and a reusable behavior tree for enemy AI, covering attack, retreating, and targeting behaviors.
- Engineered a character creation tool in Unity inspector to speed up NPC creation by 40%.

Turn-based Wrestling Brawl — Turn-based Action — Game & AI Programmer — Unity

- Created modular, character-creation scriptable objects to streamline character taunts, move-sets, and finisher animations.
- Implemented a custom turn-based battle system utilizing Finite State Machines, keeping underlying systems separate and easier to debug.
- Programmed a custom utility AI system and consideration score curves for enemy AI, creating unpredictable decisions for each round.

SKILLS:

LANGUAGES/SCRIPTING: C# , C++, Unreal Blueprints

ENGINES/SOFTWARES: Unity, Unreal Engine, GitHub, JetBrains Rider

MANAGEMENT: P4V (Perforce), Plastic SCM, JIRA, Slack

DESIGN/SYSTEMS: AI Behaviors, Behavior Trees, Finite-State-Machines, Vector Math, Tools Development, Rapid Prototyping, Multiplayer Networking, VR/AR Development

EDUCATION:

Quinnipiac University, Hamden, CT - BA in Game Design and Development

GameDev.tv Course - Unreal Engine 4 Blueprint Game Developer Online Course Completion Certification

GameDev.tv Course - Unreal 5 C++ Developer: Code Your Own Unreal Games Course Completion Certification