Developing with AI & Augmented Reality for the Classroom:

New Worlds Reading AR Expeditions

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Abstract

New Worlds Reading AR Expeditions is an educational Augmented Reality (AR) video game designed to enhance literacy in 3rd- to 5th-grade students through interactive, immersive experiences. By integrating AI tools at every stage of development—from brainstorming and concept art to programming and gameplay—we demonstrate the transformative potential of AI-driven design in educational technologies. AI-enhanced tools powered the rapid generation of creative ideas, streamlined art and music asset creation, automated game scripting, and provided multilingual voiceovers and translations to reach diverse student audiences. Moreover, these AI-driven methodologies effectively address common challenges in software and game development, such as overcoming design bottlenecks, reducing resource-intensive asset production, and simplifying complex debugging processes. Dynamic gameplay is supported by AI-driven behavior trees, allowing creatures to exhibit realistic interactions and respond to player decisions. This project exemplifies how the integration of AI and AR technologies can create engaging, personalized learning environments to enhance literacy outcomes through fun games. The collaboration between the UF College of Education and technical teams further underscores the critical role of interdisciplinary innovation in shaping the future of learning.