ANDREW BROOK

Portfolio: abrook.net

191 Depot St – Duxbury, MA 02332 | P: (339) 933-6245 | E: abrook385@gmail.com | LI: linkedin.com/in/andrew-brook

SUMMARY

Creative and goal-driven Game Developer with 7 years of experience in the Unity and Unreal game engines seeking a position to leverage skills in programming, design, and problem solving to contribute to the development of cutting-edge games and simulations

SKILLS & EXPERTISE

Programming Languages: C# (Expert) • C++ (Proficient) • JavaScript (Proficient) • HTML (Proficient) • Java (Proficient)

Software: Unity (Certified Professional – October 2022) • Unreal • MonoGame • Git • Jira • Confluence • Photoshop

WORK EXPERIENCE

HUMANA MACHINA LLC | Seaside, CA

Mid-Senior XR Software Engineer   April 2024 – Present

- Implemented multiple features within a mixed reality HoloLens 2 application for aircraft inspection using the Unity game engine
- Built an efficient and rapid algorithm for accurately assessing similarity between two images in real-time with compute shaders
- Created a noise-based system for simulating corrosion on aircraft and integrated it with data textures for comparative analysis
- Prototyped clean and modular touch-based user interfaces for mixed reality, enhancing user interaction and data visualization

RTI INTERNATIONAL | Raleigh, NC

XR Gameplay Programmer   April 2021 – April 2024

- Designed and rapidly prototyped multiple AR/VR training simulations for mobile and Quest 2 utilizing the Unity game engine
- Collaborated closely with clients and cross-functional teams to simulate real-world devices, sampling tactics, and scenarios
- Utilized strong problem-solving skills to troubleshoot technical issues and ensure high-quality, performant VR experiences
- Programmed all major gameplay systems, from simulated surface-based contamination to a functional multi-app user tablet

DARK RING STUDIO LLC | Rochester, NY

Founding Manager/Lead Developer   January 2020 – Present

- Led team of 6 developers to create 3D procedural action game built around enemy possession in the Unity game engine
- Created complex and engaging sequence-based enemy AI behaviors utilizing a Hierarchical Task Network model
- Programmed most major gameplay systems, from movement and combat to JSON-based saving/loading and item databases
- Managed programming and art workflow built around an Agile-inspired methodology with bi-weekly sprints and milestones

THE EDGE VR | Croton-On-Hudson, NY

VR Design/Development Intern   June 2019 – August 2019

- Designed and developed gameplay features, environments, and other functionality for full body VR escape room for HTC Vive
- Created modular state-based enemy AI architecture with a focus on behavioral variety and physics-based reactivity
- Heavily reduced network traffic by utilizing interpolation techniques to smoothly sync objects across network
- Increased performance of VR-intended scenes by 260% (90 FPS) with various optimization techniques and profiling

MAGIC SPELL STUDIOS. | Rochester, NY

Lead Developer/Project Manager for Spirit Labyrinth   October 2018 – May 2019

- Led team of 5 developers to make RIT-funded procedurally generated VR fantasy dungeon crawler in the Unity game engine
- Collaborated with artists and designers to develop dynamic state-based enemy AI systems linked to animation state machines
- Programmed core gameplay loop managers, spatial audio systems, UI/UX elements, and VR object interactivity

EDUCATION

ROCHESTER INSTITUTE OF TECHNOLOGY (RIT) | Rochester, NY

Bachelor of Science, *Game Design and Development*   Graduated May 2021

GPA: 3.88/4.0

Honors: Suma Cum Laude, RIT Presidential Scholarship, Dean's List: Fall 2017 – May 2021