BRANDON HESSLAU

GAMEPLAY & SOFTWARE ENGINEER

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EDUCATION

DEPAUL UNIVERSITY

Chicago, IL

B.S. Computer Science

Concentration in Game Systems

2017 - 2021

SKILLS

C++, C#, Java, Python

Gameplay Programming & Engine Development

Unity 3D & Unreal Engine

SCRUM & Agile Project Management

3D Math & Graphics Programming

Version control systems (Git, P4V, etc.)

Game & Automation Tool Development

Technical Writing & Code Documentation

Organization & Communication

WORK EXPERIENCE

MID-LEVEL SOFTWARE DEVELOPER | 2023 - 2024

JANUS Research Group | Contract

- Developed Unity-based interactive simulations, ensuring strict adherence to government contract guidelines and educational objectives.
- Engineered systems that accurately simulate real-world applications, enabling practical, hands-on learning experiences for students.
- Developed custom Unity and Excel tools to streamline development workflows and automate data management, improving team efficiency.
- Worked closely with cross-functional teams to define project scopes and deliver high-quality educational content on time.
- Leveraged Jira for task management, Perforce for version control, and conducted code reviews to ensure project efficiency and maintain high code quality.

PAST PROJECTS

BUDDY SIMULATOR 1984 | 2019 - 2021

Not a Sailor Studios | Lead Engineer | PC, Switch, PS4, Xbox | Unity

- Engineered smooth player movement and intuitive interaction systems for custom 2D, 2.5D, and 3D character controllers.
- Designed dialogue branching systems and story-based decision tracking, allowing for complex narrative paths and player-driven outcomes.
- Developed dynamic turn-based combat systems with unique character move sets, providing varied and strategic gameplay experiences.
- Collaborated with cross-functional team to ensure seamless integration of diverse gameplay elements, enhancing the cohesiveness and polish of the final product.
- Implemented port integrations for different platforms and optimized controller support, ensuring a consistent and enjoyable player experience across various devices.

MULLIGAN | 2021-2023

Not a Sailor Studios | Lead Engineer | Unity

- Engineered multi-threaded procedural level generation systems for interior and exterior world building.
- Designed an innovative in-house room builder tool, seamlessly integrating with procedural generation systems to streamline level design.
- Developed BT-based AI monster behavior using advanced techniques to enhance player hunting strategies, significantly increasing game challenge and intensity.
- Integrated photon networking frameworks for multiplayer functionality.
- Implemented custom player behavior with in-depth world interactions from hiding to searching.

ASEPRITE 3D PIPELINE TOOL | 2023

Visual Studio 2022 | C# & C++

- Built multithreaded 3D rendering system into Aseprite viewport for artists to integrate into their own workflows.
- Designed parsing systems for 3D model files .obj and .fbx.
- Engineered animation systems that process skinned mesh data from 3D model files.
- Developed shading systems with customizable render integrations (dithering, textures, specular, normal maps)

ANEKOM GAME ENGINE | 2018-2019

DePaul University | Visual Studio 2019 | C++

- Integrated OpenGL rendering, texture mapping, and 3D model importing.
- Built custom module system for modifying game object attributes.
- Created full level editor with seamless game object transformation editing.
- Added Game Object management and registration with memory recycling systems.
- Engineered collision and A* pathfinding systems.