RYAN BARRY

Game Developer | C# & MonoGame Specialist Dublin/Sligo, Ireland | 089 244 7817 | [Email](#) | [LinkedIn](#) | [GitHub](#)

PROFESSIONAL SUMMARY

Second-year Game Development Undergraduate at ATU Sligo with a strong foundation in C# programming and engine architecture. Currently building a custom 2D game engine using the **MonoGame framework** demonstrating a deep understanding of memory management, rendering pipelines, and systems design. Possesses 5+ years of management experience in high-volume hospitality, bringing professional maturity, leadership, and agile workflow management skills to development teams.

TECHNICAL SKILLS

- **Languages:** C# (Proficient), JavaScript, HTML, Python, SQL.
- **Engines:** MonoGame (Framework), Unity 2D/3D, WPF/XAML.
- **Core Concepts:** Object-Oriented Programming (OOP), Game Loop Architecture, Systems Design, Sprite Batching & Rendering, Collision Algorithm.
- **Tools:** Visual Studio, Git / GitHub, Trello (Project Management), Photoshop.

PROJECTS

Pale Roots | *Solo Developer* | Dec 2025 – Present *A top-down survival horror RPG blending hack and slash mechanics with cosmic horror.*

- **Engine Architecture:** Built a custom 2D engine from the ground up in C# (MonoGame), writing custom handlers for the game loop, content loading pipeline, and state management.
- **Systems Design:** Engineered a grid-based inventory and farming system, managing complex data structures for item states and interaction logic.
- **Rendering & Physics:** Implemented manual sprite batching for optimized rendering and AABB collision detection without relying on Unity's physics engine.

The House Of History | *Solo Developer* | Oct 2025 – Present *A text-based horror escape room focusing on narrative branching and logic.*

- **Pure Logic Implementation:** Designed strictly using C# and OOP principles (Inheritance/Polymorphism) within a .NET Console Application.
- **Narrative Engine:** Created a custom text parser to interpret user inputs and trigger non-linear narrative events based on inventory state.

Dying Fire | *Solo Developer* | *[Date] A hybrid Visual Novel / RPG Engine built entirely in WPF & XAML.*

- **System Architecture:** Manipulated the WPF UI framework to function as a game loop, utilizing the **State Pattern** for scene management.
- **Data Handling:** Implemented **LINQ** for complex inventory sorting and **SQL/JSON** for persisting player progression and dialogue trees.
- **OOP Design:** Heavily utilized **Polymorphism** and **Interfaces** to decouple game entities from UI elements.

EDUCATION

Bachelor of Applied Science in Computer Games Development *ATU Sligo* | Sept 2023 – Present (Expected 2027)

- **Key Modules:** Object-Oriented Programming, Game Engine Architecture, Data Structures & Algorithms, Mathematics for Games.
- **Current Standing:** On track for First Class Honours.

WORK EXPERIENCE

Manager & Head Bartender *Lillies Cocktail Bar & Tannery Lane | Sligo* | 2024 – Present

- **Leadership:** Managed a team of staff, handling rostering, training, and conflict resolution in a high-pressure environment.
- **Project Management:** Oversaw inventory control and stock management, requiring meticulous attention to detail similar to resource management in development.
- **Professional Growth:** Promoted to Head Bartender at age 17, demonstrating reliability and the ability to master complex skills rapidly.