

# Ethan Ball

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## Education

**Rochester Institute of Technology (RIT)**, Rochester, NY, 2024

*Bachelor of Science, Game Design and Development, Summa Cum Laude*

*Master of Science, Game Design and Development*

## Professional Experience

**Game Developer:** Changeling VR, Rochester, NY (remote) June 2023 - August 2023

- Worked on a team of 70 RIT students on a Virtual Reality narrative mystery game
- Applied game development and game engine knowledge to quickly learn Unreal Engine 4
- Utilized blueprints to refactor the player's companion notebook and implement a diegetic UI
- Solved code problems for the level designers as they prototyped mechanics
- Mentored less-experienced teammates and assisted with Perforce using prior knowledge

**AI Programmer Intern:** Rockstar Games, Andover, MA (remote) June 2022 - August 2022

- Developed a novel input system to add debugging tools and new game mechanics
- Investigated Rockstar's proprietary game engine to ideate new interactions
- Learned industry-standard C++ practices through tutorials and observation of existing code

**Teaching Assistant:** RIT, Rochester, NY January 2022 - May 2024

- Assisted students with learning C# and the Monogame engine
- Evaluated programming assignments based on accuracy, readability, and efficiency

**Operations Coordinator Intern:** Arbor Biotechnologies, Cambridge, MA June 2021 - Aug 2021

- Coordinated with Research and Development teams to meet necessary operational needs
- Assisted scientific operations department with inventory management

## Projects

*Death Chain*, Personal Project, January 2022 - December 2023

- Designed and developed a 2D action roguelike in Unity using C#
- Implemented an AI system with pathfinding, movement modes, and customizable behavior
- Generated random levels using procedural generation techniques like wave function collapse

*PS4 Space Game*, Academic Project at RIT, December 2023

- Developed a simple space shooter game on a Playstation 4 development kit using C++
- Leveraged graphics programming knowledge to set up rendering pipeline for game objects
- Implemented code architecture to allow ease of creating and manipulating game entities

*The Graphics Museum*, Academic Project at RIT, January 2023 - May 2023

- Collaborated with a classmate to create a virtual museum of graphics programming techniques
- Programmed a first-person player controller in a 3D environment using C++
- Utilized DirectX 11 and HLSL to write shaders and implement unique graphics features

## Skills

Programming Languages: C#, C++, Java, HLSL, Javascript, Python

Development: Gameplay Programming, Engine Programming, Agile Development, 3D Math

Game Engines: Unity, Unreal Engine 4, Monogame, Playstation 4 Development Kit

Software: DirectX 11, Visual Studio, Github, Perforce