NICHOLAS ALESSE

PROJECTS

VR Roguelike Wave-Based Shooter

For my capstone project at Fitchburg State and over the course of three months I worked with three other students to develop a VR roguelike wave-based shooter called Metal Frontier.

https://nalesse1.wixsite.com/website

KEY ACHIEVEMENTS

🤖 **Roguelike System**

For the roguelike system in my capstone game Metal frontier I used object oriented design and polymorphism to create the roguelike mechanic. The upgrades are stored in Unity scriptable objects and are added to the player's weapon after they select the upgrade. The upgrades all override the OnSlected() function so that only one function call is needed to apply the upgrade. I am very proud of how clean the code for this mechanic is and how simple it is to add new upgrades.

🚗 **Procedural Generation System**

For one of my other projects, Max Speed, which is an endless runner game mixed with a racing game, I developed a system to procedurally generate the road the player races on and also to procedurally place objects on the road like obstacles and off ramps. I also made a tool in the unity inspector that allowed the level designers to quickly make changes without having to go into the script, which sped up development time.

SKILLS

Unity, Godot, C#, VR Development, Optimization, Refactoring

Unity Developer

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📍 Andover, Massachusetts

SUMMARY

Unity Developer with professional and academic experience leading programming efforts on team-based projects. Skilled in Unity, VR development, optimization, and refactoring, with a proven ability to deliver clean, scalable solutions in collaborative environments. Passionate about game development and eager to continue growing as a developer while contributing to innovative projects.

EXPERIENCE

Unity Developer
03/2025 - Present

Killer Sunshine Studios Remote

Killer Sunshine is an indie game studio made up of about 20 people run by graduates from various game design schools. I currently volunteer as a programmer.

- One of my roles is game asset implementation. I receive a model after it has been modeled and textured, and I set it up in the engine by adding colliders and scripts to it, so it is ready for gameplay. I also set up empty animation controllers to get it ready for animation.
- When I am not working on game assets I am programming instead, I work where I am most needed this can range from refactoring existing scripts, to fixing bugs, to adding new functionality.
- One of my key achievements at killer sunshine is I refactored a script from 1295 lines down to around 350 lines by separating the data from the logic which made reading the script a lot easier and also made it easier to work with.

Web Developer
07/2024 - 08/2024

Power Surge Bar Arcade Remote

Completed a paid contract where I developed a full stack react web app for power surge bar arcade. The Web app was a rewards program for customers.

- Added a QR code scanning feature that lets customers earn points by scanning a QR code and also lets employees remove points from customers by scanning a QR code on the customer's device
- Restricted pages meant for employees only so that only authorized users could access them
- For the backend, connected the web app to Supabase to store user accounts and also to write database functions for adding and removing points as well as updating site content

QA Tester
07/2023 - 01/2024

Iconic Arts Remote

Iconic Arts is a company founded by Fitchburg State alumni. I volunteered when they needed QA testers for their upcoming Steam release of GoobnBalloonsDX to gain experience.

- Play tested the game after each update and provided feedback and also reported any bugs to the development team
- Tested the game on steam deck and reported bugs that were unique to that platform
- Provided potential causes and solutions with each bug I reported

EDUCATION

Bachelor of Science in Game Design, Minor in Computer Science
09/2019 - 05/2024

Fitchburg State University Fitchburg, MA

- Summa cum laude

GPA | **3.85** / 4.0