

# Dillon Drummond

## Game Developer & Software Engineer

I love writing code because it's the closest I'll ever come to being a wizard.



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<https://youtu.be/aJWZVdJ4ZpE>

## PROJECTS

### Solitary Space , Spring 2023

Gameplay & Generalist Programmer

- Solitary Space is a VR spaceship simulator with arcadey, turret-based combat
- Responsible for graphics, gameplay, animation, and tools on a team of 3 programmers using Unity and C#
- Created visual elements like a 3D holographic map, body and hand presence with inverse kinematics for the arms to improve UX
- Created an event-based input system to simplify Unity's VR toolkit, and interactable controls like buttons, levers, and ship controls for the player to improve immersion and gameplay

### Ubisoft Game Competition, Spring 2023

Gameplay & Generalist Programmer

- Created Flip Against the Frontier, an action-arcade pinball game where you play inside the machine. Players build new parts for the machine and using the pinball to fighting off the machine's anti-cheat to reach new high scores
- Collaborated on a multi-disciplinary team of 8 developers using Unity and C#, contributed 350 hours over 10 weeks
- Created audio tools improving ease-of-use for designers, diegetic UI centered around the pinball machine to immerse players, and performant gameplay systems to deliver a fun experience

### Daedalus Dungeon Generator , Fall 2022

Solo Programmer

- Procedural dungeon generator tool using Unity and C#
- Using algorithms such as A\*, Delaunay tetrahedralization, and minimum spanning trees to calculate realistic hallways between rooms
- Created editor tools and comprehensive documentation before releasing on Github as a Unity plugin

### Mid-Death Crisis, Fall 2022-Spring 2023

Gameplay & Generalist Programmer

- A local coop, turn-based, strategy game built using Unreal Engine 5, C++, and blueprints
- Created robust designer tools to establish pipelines for gameplay and narrative implementation
- Employed use of rapid prototyping, frequent testing, and the Agile methodology to improve gameplay quality and eliminate bugs

## EDUCATION

### Champlain College, Burlington, VT

Pursuing a Bachelor's Degree in Game Programming, Expected May 2024

Pursuing Minors in Math and Cybersecurity, Expected May 2024

- President's List Fall 2020, Spring 2021, Fall 2021, Spring 2022, Spring 2022, and Spring 2023
- Dean's List Fall 2023
- 3.99 GPA
- Trustee's List 2020-2021, 2021-2022, and 2022-2023 school years
- Study Abroad Montreal, Canada, Spring 2023

## WORK EXPERIENCE

### Game Programmer, 09/2022 - 08/2023

Emergent Media Center, Champlain College, Burlington, VT

- Used Unity, C#, C++, QT, and Agile development process across several projects
- Worked with a team of 4 developers on each project with varying disciplines between programming, art, and design
- Created a series of prototypes for an educational game for Beta Technologies to showcase their new eVTOL aircraft, ALIA
- Created a DICOM file viewer and construct voxel volumes from the 2D cross sectional images
- Leveraged ChatGPT and StableDiffusion to create both a text adventure and a skybox generator
- Utilized ChatGPT to develop a tool to help Dungeon Masters in D&D 5e

### Strategic Designer 05/2021 - 06/2021

Emergent Media Center, Champlain College, Burlington, VT

- Used Human Centered Design to ideate and synthesize solutions to increase participation in the VSAC GearUp program
- Conducted meetings with clients, benefactors, and shareholders to ensure all needs were being filled

## SKILLS

C#

Unity

C/C++

Unreal Engine 5

Git Bash

Jira

Agile

Scrum

Trello

GML

Teamwork

Communication

Linear Algebra

Calculus

3D Math

Computational Math

Confluence

Data Structures

Algorithms

VR Development