Alex Adkins

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Education

University of Maryland, Baltimore County (August 2018 - present)

- Bachelor of Science: Computer Science
- Expected graduation: December 2022

Work and Volunteer Experience

Unity Game Engine Instructor - Code In The Schools (2021-Current)

- Taught a course on the Unity Game Engine accredited by the University of Baltimore
- Currently teaching a Unity game engine course during the school year

Floor Staff - Regal Entertainment Group **(**May 2019 - January 2020)

- Duties Included working concessions, box office, ticket taking, ushering.

Extracurricular Activities

Game Developers Club - UMBC (2019-2021)

- Collaborated with groups of students to design and code playable video games during the fall and spring semesters. Bruise Cruise was one of the games elected by club members to get presented at UMBC's Undergraduate Research and Creative Achievement Day (URCAD).

Super Smash Bros. Club - UMBC (2019 - 2020)

- Competed with other UMBC students in Super Smash Bros.

Skills

- Proficient in C++
- Proficient in Java
- Proficient in C#
- Game Development in Unity
- Game Development in Unreal Engine 4
- Basic knowledge of HLSL
- Basic knowledge of x86_64 NASM Assembly
- Basic knowledge of emacs and command line

Software Projects

Cannonball the Clown - Potomac MD 2019 - 2020, https://alexjadkins.itch.io/cannonball-the-clown

• Designed, coded, and drew everything in this browser based video game. Cannonball the Clown is a roguelike dungeon brawler created using the Unity engine with c# scripting. The generation of the dungeon map and enemies relies on a procedural generation algorithm.

Bruise Cruise - UMBC 2019 - 2020, https://bentenure.itch.io/bruise-cruise

• As VFX Programmer, worked on the lighting and post processing effects. Worked on a team of 7 UMBC students to create a playable video game for UMBC's Undergraduate Research and Creative Achievement Day (URCAD) 2020. Bruise Cruise is a side-scrolling beat 'em up. Game was created using the Unity engine with c# scripts. Project used Gitlab for design and Github for version control.

Resizeable Maze - Potomac MD 2021, https://youtu.be/FgoloM5rYYg

• Using a growing tree algorithm, I coded a maze actor in the Unreal Engine with a customizable size and seed.

Rainbow Simulation - Potomac MD 2021, https://youtu.be/Z6f3oQz62oA

• Using six different rainbow simulation algorithms, I coded and added an unreal blueprint node that will simulate a rainbow from one of the six available methods. These methods are detailed here and here.

Rolling Balls Using Boid Behavioral Model - Potomac MD 2021, https://www.youtube.com/watch?v=6L_BRn94ulA

• I created a flock of rolling actors using the boid behavioral model in the Unreal Engine. This required the use of three separate forces; Separation, Alignment, and Cohesion. The separation force moves outward balls away from the player. The alignment force steers all balls towards the average velocity of the flock. The cohesion force moves the balls in the average center of mass of balls around it. When these three forces combine, it produces a bird like flock effect.

Cloud/Fog Shader - Potomac MD 2021, https://www.youtube.com/watch?v=62bqLMJj5w8

• A simple fog/cloud shader applied to an actor in Unreal Engine.