

# David Robitaille

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## Professional Experience

### Associate Software Development Engineer

Jan. 2021 – Present

#### Gamebreaking Studios, working remotely

- Redesigned and implemented the level selection system for a mobile Match-2 game to increase the longevity of the game's difficulty curve
- Streamlined the process of creating and testing levels by developing tools for designers

### Gameplay Software Engineer Intern

June – Dec. 2020

#### Gamebreaking Studios, working remotely

- Collaborated with a AA game development studio as part of an outsource team to develop a series of "training minigames" in Unreal for an unannounced console title
- Advanced internal R&D efforts of the studio by creating a prototype of a game idea

### Gameplay Programmer / Developer

Mar. 2019 – June 2020

#### Games for Entertainment and Learning Lab, Michigan State University

##### **Plunder Panic** – Anticipated release: 2021 on Nintendo Switch, Steam

*A multiplayer arcade game; winner of the 2017 IndieCade Audience Choice Award*

- Designed and developed a dual-utility AI for computer-controlled players
- Implemented a node-based movement system for the AI, utilizing a modified A\* for pathfinding
- Streamlined the process of creating new AI behavior using the Subclass Sandbox design pattern
- Redesigned and implemented an interactive character select menu

##### **Whiplash** – Finalist at the 2020 Intel University Game Showcase on Valve Index

*A VR action game where players use two lightning-powered axes to fight through a horde of robots*

- Developed a "Kung-Fu Circle" attack system to prevent overwhelming the player during combat
- Prototyped and designed the primary mechanics to create a vertical slice of the game that was then approved for further development
- Designed and developed an abstract state machine to facilitate development of the enemy AI

##### **BPG Africa Games** – Released January 2020 on iOS

*A package of brain-training mini-games to cognitively rehabilitate children with brain damage*

- Re-created the original set of Brain Powered Games and began prototyping Village Builder
- Traveled to Uganda to playtest and oversee the training of local researchers

### Teaching Assistant (TA)

Aug. – Dec. 2019

#### MI 431 Advanced Game Development course, Michigan State University

- Instructed 20+ students on advanced game programming topics including Gang of Four design patterns, AI, procedural generation, linear algebra, and Entity Component Systems/data-oriented design

## Education

### Michigan State University

Graduated Fall 2020 With High Honor

- BA in Media and Information, Specialization in Game and Interactive Media Design
- Minor in Computer Science, Minor in Game Design and Development

**3.99/4.0 GPA**  
MSU Honors College

## Skills

- C#
- C++
- Python
- Unity Engine
- Unreal Engine 4
- UML
- Object-oriented design
- Data structures and algorithms
- 3D math

## Interests

Game design, Artificial intelligence, Design patterns, Procedural content generation, Systems design, Tools programming

## Extra-Curricular Activities

Spartasoft Game Development Club, Overwatch Club

Michigan State University