# Curriculum

The Bootcamp curriculum is divided into six modules. Each module teaches you new skills to become a successful game developer. You will practice your skills with various activities and apply the skills you learned in some cases to a game template.

# **Part I: Foundations**

# **Introduction to Game Development**

Gain the introduction of basic concepts at the core of game development, delving into vital concepts like gaming loop, 3D assets, 3D physics systems, animation, player input, among other concepts using the Unity Hub and Unity Editor. You will also get started in C# coding using Git for versioning.



Portfolio Project: Bowling

## **Coding for Games**

Dive deep into the fundamentals of Object-Oriented Programming (OOP) and harness its power with C# to craft rich gaming applications. Establishing a solid foundation in C# empowers developers to sculpt dynamic games, enriched with tailored behaviors and enduring data persistence. Moreover, master the art of teamwork by leveraging collaborative tools such as Git and GitHub.



Portfolio Project: Objects

# Part II: Intermediate

#### **Game Architecture**

Delve into the importance of structuring code for robustness and scalability. Central to this approach are industry-standard design patterns, that solve common problems and challenges. Employ these design patterns to create scalable games, and gameplay mechanics anchored in a detailed game design document.



Portfolio Project: Turning Test

# **Data Structures and Algorithms**

Dive into the intricacies of selecting the ideal data structures and algorithms tailored to specific scenarios and challenges. Grasp the nuances of basic algorithm design techniques, analyze algorithmic complexity, and implement use common data structures, ensuring solutions are both effective and efficient.



Portfolio Project: Farm Buddy

# **Multiplayer Games**

Dive into the world of Application Programming Interfaces (APIs), the key enablers for robust network communication within gaming applications. With APIs, games come alive with multiplayer capabilities, enriched statistics sharing, and efficient information storage. By the end of the module, you will be equipped to develop dynamic multiplayer games and seamlessly integrate network-based services into their game development toolkit.



Portfolio Project: Tanks

# **Capstone Project**

You will use the skills, knowledge and techniques you have learned throughout the Bootcamp to create a final project. The goal is to create a minimum viable product, or MVP, which can be summarized as a basic version of your idea and incorporates all the concepts you've learned. Finally, you will have the opportunity to pitch your project to industry leaders who will give you feedback on your game.