

Game Development Knowledge Bank

Version : 1.0, 1†

This document provides links and references to articles, websites, and YouTube videos relevant to game development and the Unity game engine. The contents of this document are subject to change, and its scope is intended to be ever-growing.

You can contribute to this document by adding a comment or sending me an email at [Abhishek Jathan](#) .

Table of Contents,,,

Beginner

[Getting Started](#)

[Courses](#)

[Asset stores and Free asset repositories](#)

[Scripting and Programming](#)

[Design and art](#)

[Audio](#)

[Animation](#)

[AR/VR](#)

[Game Designing](#)

[Game development communities and Magazines](#)

[Books](#)

[Knowledge Repositories](#)

Intermediate

[Courses](#)

[Scripting and Programming](#)

[AI](#)

[Design and Art](#)

[Animation](#)

[Game Designing](#)

[Youtube Channels](#)

Advanced

[Scripting and Programming](#)

[Design and Art](#)

[Animation](#)

[Game Designing](#)

[Version notes](#)

[1.0:](#)

[To Do:](#)

Beginner

Getting Started

1. [Game Development for beginners](#)
2.  [The Unity Tutorial For Complete Beginners](#)
3. [Playlist on quickly getting started with a Game.](#)
4. [What is Unity in 100 seconds](#)

Courses

1. [Learn game development w/ Unity | Courses & tutorials in game design, VR, AR, & Real-time 3D | Unity Learn](#)
 - a. Unity Learn has everything you need to get started up till intermediate level of programming, VFX, systems designing.
2. [Video Game Development Using Unity: Code Games with C# | Udemy](#)

Asset stores and Free asset repositories

1. [Unity Asset Store](#)
2. [Kenney](#) - free low poly assets
3. [free3d](#)
4. [Reiner's Tilesets](#) - A blog with free 2D and 3D graphics.
5. [Polyhaven](#) - Textures, Models and HDRI images

Scripting and Programming

1. [Basics of Computer Programming For Beginners - GeeksforGeeks](#)
2.  [Object Oriented Programming - The Four Pillars of OOP](#)
3. [Design patterns used in Unity - Playlist](#)
4. [Design patterns in C#](#) - Beginner and Intermediate
5. [Basics of Shader programming](#)
6. [Mix and Jam](#) - Cool mechanics from other games recreated in Unity
7. [Math for Game devs](#) - Playlist by [Freya Holmer](#)
8. [InfallibleCode](#) - Game optimizations and tips for writing cleaner code.

Design and art

1. [Krita](#) - Free alternative to Photoshop
2. [Inkscape](#) - Free alternative to illustrator
3. [VFX](#) - Amazing particle effects and shaders tutorials
4. [Environment design speed build](#)
5. [Doctor strange portal effect in realtime](#) - Using Unity's VFX graph to design particle effects

Audio

1. [GameSounds](#) - Archive of all kinds of royalty-free game sounds.
2. [FreePD](#) - Public Domain Music
3. [FreeSFX](#) - free sound effects
4. [Freesound](#) - collaborative database of Creative Commons Licensed sounds
5. [Kavex's GameSounds](#) - Free sounds for any use
6. [Musopen](#) - Royalty free music.
7. [Octave](#) - free library of UI sounds, handmade for iOS.
8. [PacDV](#) - royalty free sounds collection.
9. [SoundBible.com](#) - Royalty-free of sound effects under various licenses.

Animation

1. [Rive](#) - Build 2D animations that work everywhere, super fun to use
2. [OpenToonz](#) - Built for professional 2D movies, free and open source
3. [2D Animation in Unity](#) - Quick 15 min tutorial on getting started with animating 2D characters. Animation Rigging package is used.
4. [Animation Rigging](#) - Beginner tutorial

AR/VR

1. [Playlist on developing AR content](#) using Vuforia SDK
2. [Unity AR Foundation for AR content](#)

Game Designing

1. [World of Level Design - Tutorials for Becoming the Best Level Designer and Game Environment Artist](#)

Game development communities and Magazines

1. [Game Developer](#) - Has a lot of great articles on various topics related to game development and Unity.

2. [Game Development Stack Exchange](#)
3. [r/gamedev](#) - ask questions here
4. [r/unity3d](#) - ask questions here as well

Books

1. [Timing for Animation](#) - Must read for beginners in animation

Knowledge Repositories

1. [GitHub - Kavex/GameDev-Resources: :game die: A wonderful list of Game Development resources.](#)
2. [GDC](#) - Has many videos relevant to every category in game design and development

Intermediate

Courses

Scripting and Programming

1. [Real-Time Rendering Resources \(realtimerendering.com\)](#) - Advanced graphics programming
2. [OpenGL](#) - Playlist by TheCherno on developing OpenGL applications from scratch using C++. Explores many essential concepts of computer graphics.
3. [C# Programming Guide](#) - Microsoft
4. [Intermediate Scripting - Unity Learn](#) - For more in-depth information on intermediate-level programming concepts, please see the link above (#3).
5. New Input System
 - a. [Workflows](#) - There are several ways in which you can utilise this, checkout this link for all the different workflows
 - b. [Video](#) on New Input System
 - c. [Full project](#) using New Input System
6. [Event system](#) - Very useful for interaction systems and some other major systems

AI

1.  [Unity NavMesh Tutorial - Basics](#) Quick and easy tutorial on getting started with Navmesh
2.  [How to use Machine Learning AI in Unity! \(ML-Agents\)](#) Quick and easy intro tutorial to reinforcement based AI

Design and Art

1. <https://youtube.com/playlist?list=PLT3U7IQ2-mWdmL0rApnZHwuxlgUcgRVFC>

Animation

1.  Creating procedural walk movement | Prototype Series - Procedural animation using some c# scripting and the animation rigging package

Game Designing

Youtube Channels

1. [\(4209\) Game Dev Guide - YouTube](#)

Advanced

Scripting and Programming

Design and Art

Animation

Game Designing

Version notes

1.0:

1. Created divisions for beginner, intermediate and advanced users.
2. Added a Table of Contents section
3. Updated Summary of document
4. Added some new links in intermediate section

To Do:

1. Reorganise sections, refine categories

