

LEARNING AR WITH UNITY

1. Introduction Augmented reality (AR)

- Why? and Where to Choose AR
- Limitations of AR
- AR Vs VR
- Hardware for AR - Available in market
- Software for AR - Available in Market and its license
- Wikitude Vs Kudan Vs Vuforia
- Installation of Unity 2018

2. Basics of Unity:

- Basics of Unity
- How to position, rotate and scale gameobjects in unity
- Adding Rigidbody to sphere and saving the scene
- Adding Material Color's to GameObjects
- Adding Background Images (Textures) to GameObjects
- Prefabs in Unity
- Concept of Parent & Child GameObjects
- What are C# scripts | Explained in details
- Rotating the Sphere GameObject's
- Getting A Wikitude / Vuforia
- Building to Mobiles
- Let's Build an Android App with Unity
- Building AR Experience to Android

3. AUGMENTED REALITY Project GREETING CARD

- Projecting Cake 3D Model on top of First Image Target
- Adding 3D text on top of Second Image Target
- Crediting the Author of 3D Model
- Adding Audio
- Building and Running the AR Greeting Card App

4. AUGMENTED REALITY GREETING CARD WITH 2D CANVAS

- Adding Background Image on Canvas
- Adding 2D Text inside the Canvas
- Adding UI Buttons or 2D Buttons
- Rotating the Cube
- Switching between Scenes on Button click
- Designing the Back and Close Image Button
- Script for Back and Close Image Button
- Building the ARGreetingCard app (with Background Image)
- Building the ARGreetingCard app (with Smartphone Camera Output)

5. VIRTUAL BUTTON & AUGMENTED REALITY project BUSINESS CARD

- What are Virtual Button's in Vuforia
- Setting Up License Key for ARVirtualButton
- Adding Virtual Button & GameObject's on top of Image Target
- Script to check whether the Virtual Button is Pressed or Released

- Building the apk file for ARVirtualButton app
- ARBusinessCard Application Intro
- Setting Up License Key for ARBusinessCard project
- Adding multiple Virtual Buttons on Image Target
- Playing video file's on top of Plane GameObject's
- Deactivating the Plane GameObject's
- Changes in ARBCard Script
- Programming logic for registering multiple Virtual Button Whiteboard animation
- Registering the 3 Virtual Button code
- Building the apk file for ARBusinessCard application

6. 2D Image Recognition and Tracking :

- How it works (Camera Representation, Marker Detection, Post Estimation)
- Single Image Training & Detection
- Multiple Image Training & Detection
- Lighting the Way
- Tracking Multiple Markers

7.3D Object Recognition and Tracking :

- Marker Training
- 3D Object Marker with Occlusion
- 3D Scene Recognition

8.Markerless Tracking :

- Getting Started with Instant Tracking
- Markerless Tracking
- Adding Physics Simulations to a Markerless World
- Hiding and Showing Augmented Objects

9. Getting deeper into Markerless Tracking with ARFoundation