AR and VR Development

A. AR and VR Foundations

1. Introduction to Immersive Tech
• What is AR
• What is VR
• Industry use cases

2. Tools Overview
• Unity basics
• Unreal Engine basics

Output: AR VR fundamentals summary sheet

B. 3D Design and Asset Creation

1. 3D Modeling Essentials
• Meshes
• Textures

2. Tools for Asset Design
• Blender basics
• Importing assets into Unity

Output: Simple 3D object for AR VR environment

C. AR Development

1. AR SDKs
• ARCore
• ARKit

2. Tracking and Anchors
• Image tracking
• Plane detection

Output: Basic AR app that places objects in real world

D. VR Development

1. VR Environments
• Scene setup
• Lighting
• Camera control

2. VR Interaction
• Controllers
• Object grabbing
• Movement logic

Output: Interactive VR mini scene

E. Programming for AR VR

1. C Sharp for Unity
• Variables
• Functions
• Event handling

2. Game Logic Scripting
• Collisions
• Animations
• UI interactions

Output: AR VR scripting practice project

F. AR VR Integration with AI

1. Computer Vision Basics
• Object detection
• Marker based AR

2. AI Enhancements
• Gesture tracking
• Voice interaction

Output: AR VR scene with AI based interaction

G. AR VR Projects

1. AR Product Visualization
• 3D object placement
• Real time scaling

2. VR Experience Build
• Virtual walkthrough
• Interactive hotspots

Output: Final AR VR application project