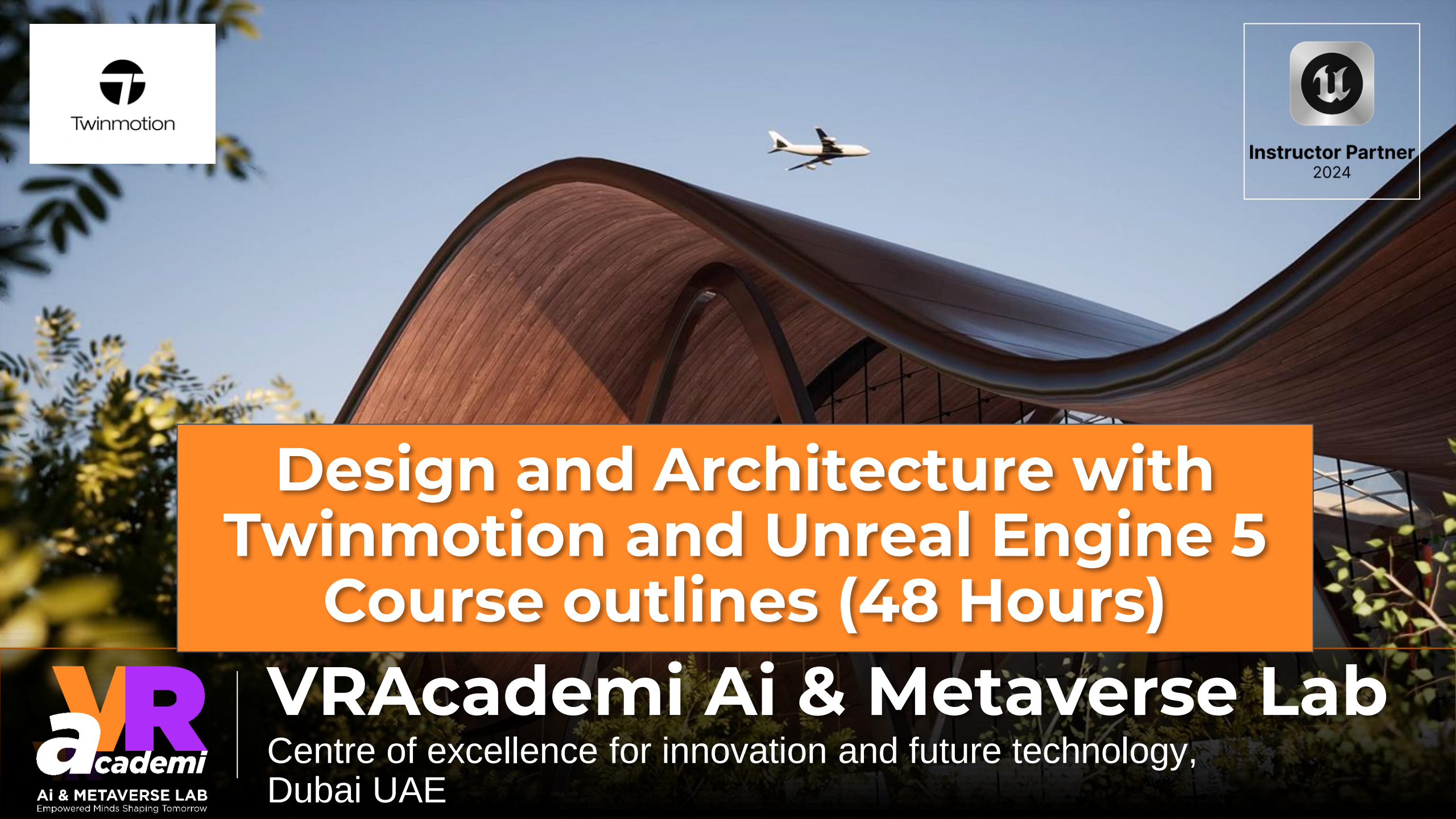

Twinmotion
Instructor Partner
2024
Design and Architecture with Twinmotion and Unreal Engine 5 Course outlines (48 Hours)
VRAcademi Ai & Metaverse Lab
Centre of excellence for innovation and future technology, Dubai UAE
VR academi
Ai & METAVERSE LAB
Empowered Minds Shaping Tomorrow

Ai & METAVERSE LAB

Empowered Minds Shaping Tomorrow

VRAcademi Ai & Metaverse Lab

VRAcademi is a pioneering educational institution that leverages cutting-edge technologies to redefine learning experiences. Specializing in Virtual Reality (VR), Augmented Reality (AR), Extended Reality (XR), Artificial Intelligence (AI), and Robotics, VRAcademi aims to prepare students for the future by equipping them with the skills and knowledge needed to thrive in a rapidly evolving digital landscape. The institution offers a wide range of courses and workshops tailored to various age groups and professional levels, focusing on digital art, game development, filmmaking, storytelling, design, robotics and innovation. The AI and Metaverse Lab at VRAcademi in Dubai is a state-o the-art facility dedicated to immersive learning and innovation.

Twinmotion

Instructor Partner
2024

AUTHORIZED
TRAINING CENTER
2023

Future-Ready Courses

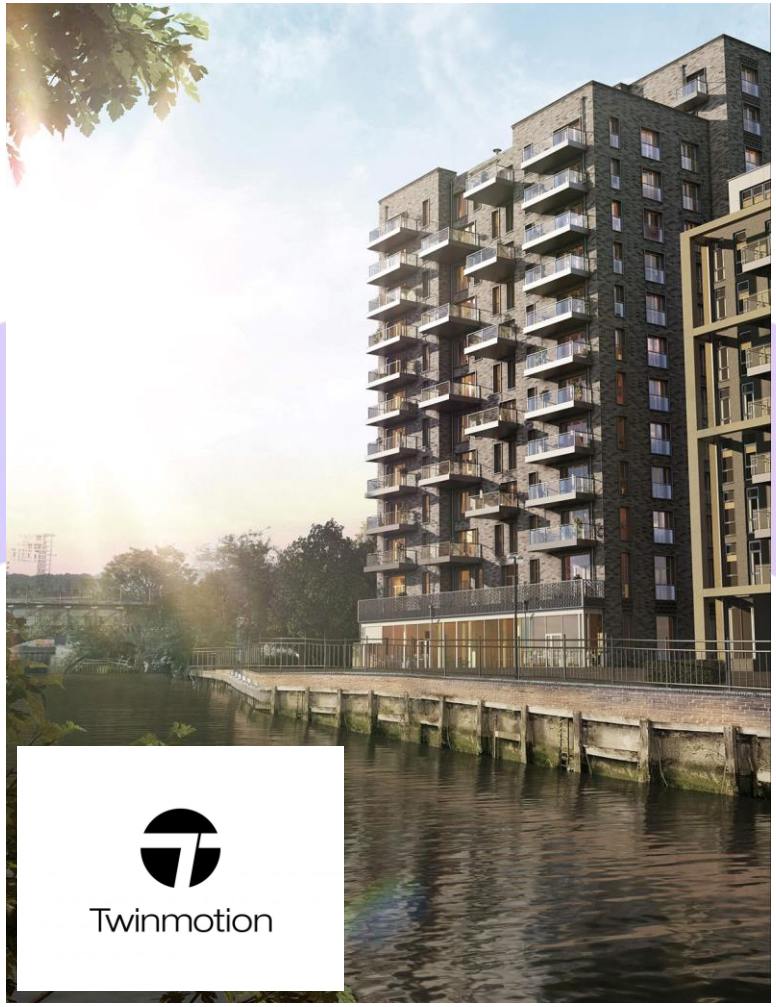
Courses meticulously crafted to align with future demands, Immersive Movie Making, Robotics, Ai Coding, Unreal Engine Game Development courses authorized by Epic Games.

Innovation Hub

State-of-the-art Artificial Intelligence and Metaverse Lab serving as an incubation hub for immersive learning, innovation, entrepreneurship, creativity, and future learning.

Our Learning Environment

The XR Immersion Lab



The Future of Design and Architecture with Twin Motion & Unreal Engine

The future of design and architecture with Unreal Engine is incredibly promising and transformative. Unreal Engine, a powerful real-time 3D creation platform developed by Epic Games, has already been making significant strides in revolutionizing how designers and architects visualize and create their projects. ArcViz in Unreal Engine, is one of unprecedented creativity, efficiency, and innovation, empowering designers and architects to push the boundaries of what's possible and create truly immersive and impactful experiences.

7 whys of Future Design with Unreal Engine

Why to get Trained in Twinmotion and Unreal Engine for Architectural design

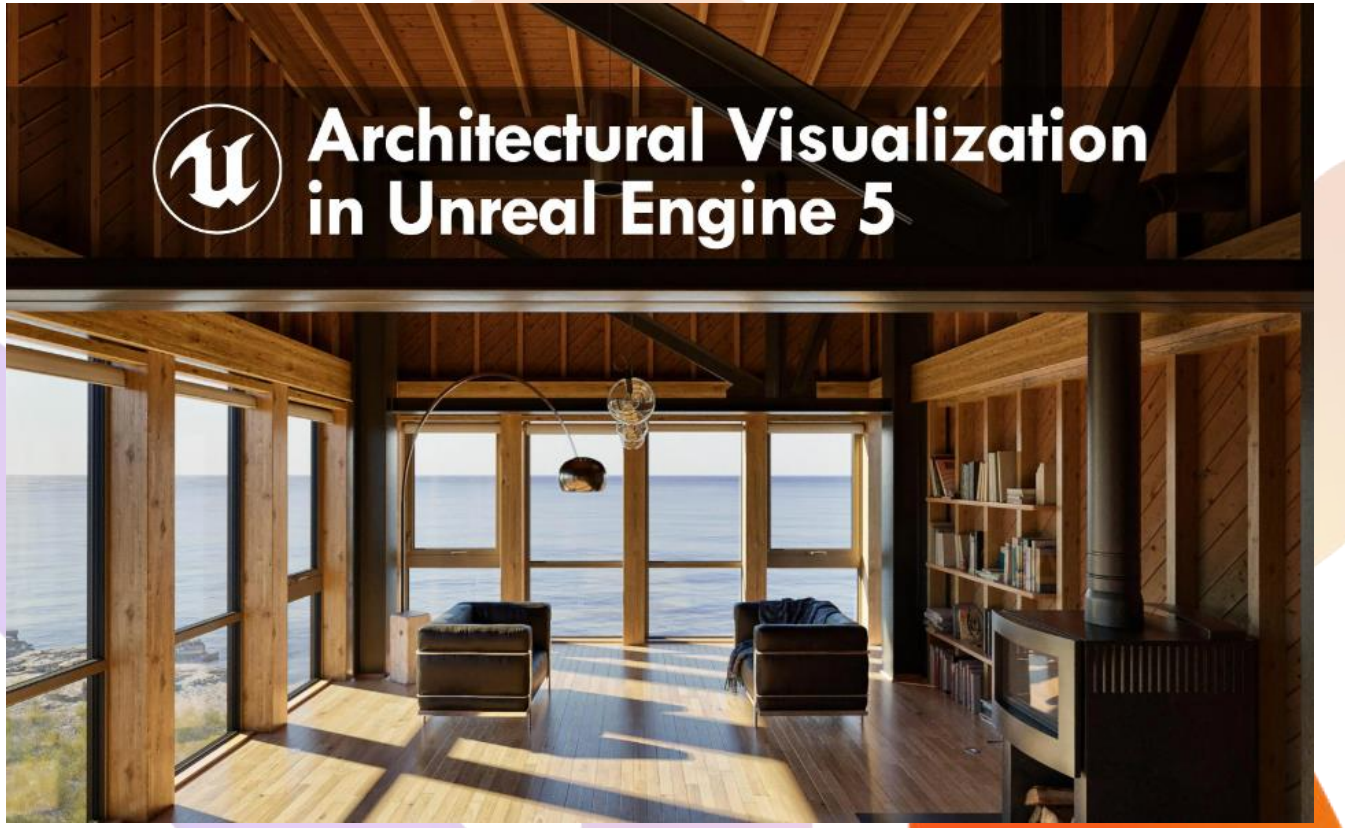
1. Real-Time Visualization
2. Immersive Experiences
3. Interactive Design Tools
4. Collaborative Workflows
5. Generative Design
6. Simulation and Analysis
7. Cross-Industry Applications

Future Design and Architecture with Twin Motion and Unreal Engine

1

Real-Time Visualization:

Unreal Engine's real-time rendering capabilities allow designers and architects to see their creations come to life instantly. This means no more long rendering times or waiting for previews to generate. Designers can make changes on the fly and immediately see the results, speeding up the iteration process and fostering greater creativity.



Future Design and Architecture with Twin Motion and Unreal Engine

2

Immersive Experiences:

With Unreal Engine's support for virtual reality (VR) and augmented reality (AR), the future of design and architecture could involve immersive experiences where clients can walk through virtual buildings or spaces before they are even constructed. This not only enhances the design review process but also helps clients better understand and experience the proposed designs.

Future Design and Architecture with Twin Motion and Unreal Engine

3

Interactive Design Tools:

Unreal Engine provides a wide range of tools for creating interactive experiences, such as interactive walkthroughs, dynamic lighting, and interactive elements within the environment. Designers and architects can use these tools to engage clients more actively in the design process and gather valuable feedback in real-time.

Future Design and Architecture with Twin Motion and Unreal Engine

4

Collaborative Workflows:

Unreal Engine's collaborative features enable multiple designers and architects to work together on the same project simultaneously, regardless of their location. This fosters greater collaboration and streamlines the design process, as team members can see each other's changes in real-time and provide instant feedback.

Future Design and Architecture with Twin Motion and Unreal Engine

5

Generative Design:

Leveraging Unreal Engine's capabilities in procedural generation and parametric design, architects can explore a multitude of design variations and options automatically. This allows for more innovative and efficient design solutions by quickly generating and evaluating numerous design alternatives based on predefined parameters.

Future Design and Architecture with Twin Motion and Unreal Engine

6

Simulation and Analysis:

Unreal Engine's integration with simulation tools enables architects to simulate real-world conditions such as lighting, acoustics, airflow, and structural integrity. This allows for more informed design decisions and helps identify potential issues early in the design process, ultimately leading to better-designed buildings and spaces.

Future Design and Architecture with Twin Motion and Unreal Engine

7

Cross-Industry Applications:

Beyond traditional architecture and design, Unreal Engine is increasingly being used in fields such as urban planning, landscape architecture, interior design, and product design. The future will likely see even more diverse applications of Unreal Engine across various industries, further blurring the lines between virtual and physical design.

48 Hours Course outlines

Future Design and Architecture with Twin Motion and Unreal Engine

Programme Highlights

With this in-depth course on interactive visualization in Unreal Engine 5, you can maximize Unreal Engine's capabilities for architectural visualization. This course will equip you to produce breathtaking, photorealistic, and interactive representations of architectural projects, whether you're an architect, designer, or visualization expert.

48 Hours Course outlines

Future Design and Architecture with Twin Motion and Unreal Engine

Learning Objectives

- Understand the basics of real-time rendering in Unreal Engine.
- Understand VR and AR development within Unreal Engine.
- Master the creation of interactive elements using Blueprints and scripting.
- Learn to set up and manage collaborative projects in Unreal Engine.
- Understand what are procedural generation and parametric design techniques in Unreal Engine.
- Gain proficiency in integrating simulation tools with Unreal Engine.
- Explore the diverse applications of Unreal Engine beyond architecture.

Learning Outcomes

At the end of the course you will be able to:

- Proficiency in creating immersive experiences for clients to explore architectural designs in virtual environments.
- Capability to develop interactive walkthroughs and dynamic design presentations for client engagement.
- Ability to work efficiently in a team environment, coordinating design changes and feedback in real-time.
- Ability to adapt Unreal Engine skills to various design fields such as urban planning, landscape architecture, and product design.
- Ability to create visually stunning and responsive 3D scenes in real-time Immersive Experiences.

40 Hours Course outlines

Future Design and Architecture with Twin Motion and Unreal Engine

Programme Highlights

Introduction to Twinmotion

Importing files and arranging the data in outliner

PBR materials

Using Animated Characters

Create breathtaking landscape and foliage

Lighting

Rendering output for Images or Video

First Project in Unreal Engine

Create new project

Templates

Editor Interface

Cartesian coordinates and pivot

Transformations, Local and World, World Outliner

Navigation in a level and Play test

Working with Geometry in Unreal Engine

Geometry Optimization in Unreal Engine

Geometry Editing in Unreal Engine

Copying, Merging and Placing Assets in the scene

Post Process Volume and Interior SunLight

Solving the problem with Light Artifacts

Materials and Shaders

PBR Workflow, Exterior Materials

Interior Materials, Two-sided Material

Recessed Lighting Material

Material Parameters

Material Instances

40 Hours Course outlines

Future Design and Architecture with Twin Motion and Unreal Engine

Programme Highlights

Introduction to Lighting in Unreal Engine

Interior Artificial light Settings

Exterior Artificial light Settings

Fire in the Fireplace

Setup Reflection capture probes

HDRI Backdrop

Building Light

Environment and Post Process Volume

Landscaping

Sculpt Brushes

Blueprint Brushes

Landscape Materials

Foliage and Plants

Final Post Process Volume Settings

Physics and collisions

Gravity, Friction

Collision, Simulation settings

Particles in Unreal Engine

Blueprint fundamentals

Getting started with Blueprints

Character and Collision

Blueprint Doors Opening

Scene Optimization with Levels

Changing a Position of the Sun with Blueprint

Foliage Optimization with Blueprint

Interactive Furniture Replacement

Camera Zoom with Blueprint

40 Hours Course outlines

Future Design and Architecture with Twin Motion and Unreal Engine

Programme Highlights

UMG

UMG and Editor Utility Widget

Main Menu, Preloading Screen

High Resolution Screenshot

Reminder Bar and Quit the Project

Project Icon

Sequencer

Level Sequencer

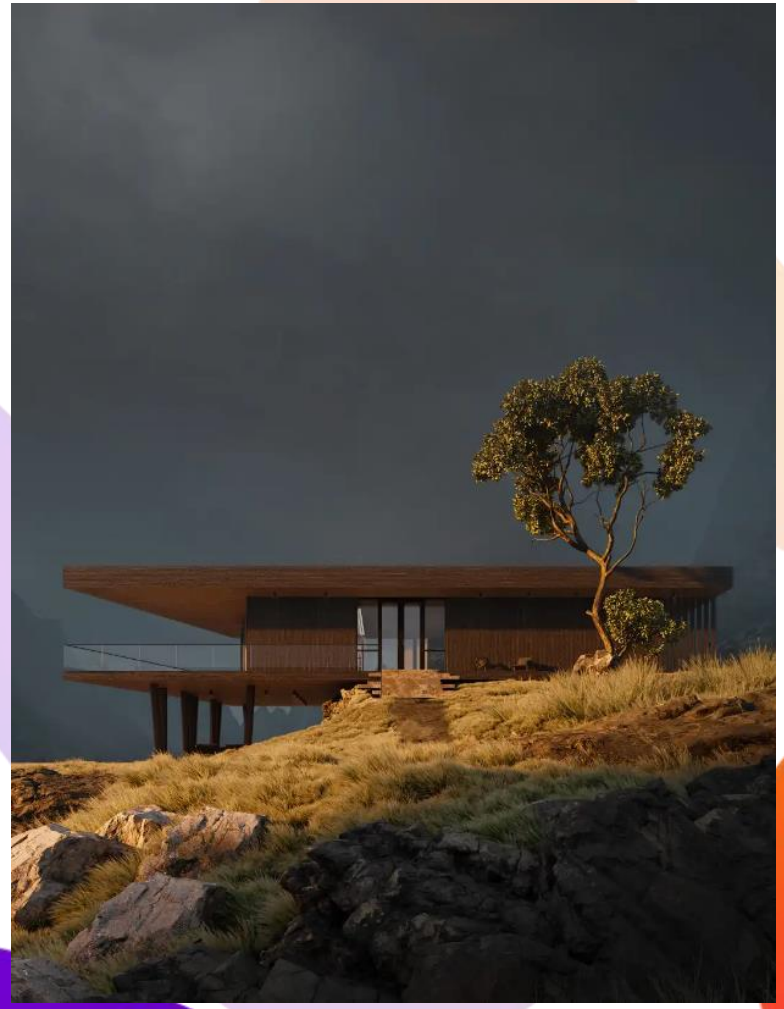
Architecture Cinematic Rendering and Animation

Packaging for publishing

Packaging and deployment

Windows Builds and Packaging

Android Builds and Packaging



Future Design and Architecture with Twin Motion and Unreal Engine

Instructors: Kishore Seran, ISN Pradeep, DXB

Kishore Seran and Pradeep ISN are Unreal Authorized Instructors with more than 20 years of professional experience in the Media and Entertainment industry with a background of incubating hundreds of students in various interactive 3D technologies related to web, VR, architecture and gaming.

Instructors: Sonal Ahuja , City Designer, Ai, XR and Technology, DXB, London

Meet Sonal Ahuja, the visionary behind VRAcademi Ai & Metaverse Lab which was brainchild of his teenage son. With over 30 years of global expertise in managing design and cities and urban Infrastructure, Sonal is redefining education through AI, Robotics, and the Metaverse. Join the transformative journey where research meets innovation in education. Sonal is one of the founders of Ai revolution in urban landscape.

Over 25 years ago he laid down the foundations on the use of biomimicry genetic algorithms for solving complex urban problems while pursuing his PhD research at Imperial College London. A serial entrepreneur having investments in his previous companies from Porshe SE Group in Germany and Translucia , MQDC Group Thailand, he is a global pioneer in innovation.

Empowered Minds Shaping Tomorrow