INFOSOFT IT SOLUTIONS

Training | Projects | Placements

AUGMENTED REALITY DEVELOPMENT

Introduction to Augmented Reality

- **Overview of Augmented Reality**
  - Definition and history of AR
  - Differences between AR, VR, and MR
- **Applications of AR**
  - Industry use cases: Gaming, Education, Healthcare, Retail, etc.
- **AR Hardware**
  - AR devices: Smartphones, tablets, AR glasses (HoloLens, Magic Leap)
- **AR Software**
  - AR development platforms and tools

AR Development Fundamentals

- **Setting Up the Development Environment**
  - Installation of Unity3D
  - Overview of AR SDKs (ARKit, ARCore, Vuforia)
- **Basic AR Concepts**
  - Understanding 3D space and coordinates
  - Scene setup and management

ARKit and ARCore

- **ARKit (for iOS)**
  - Introduction to ARKit
  - Setting up ARKit in Unity
  - Working with ARKit features: Plane detection, hit testing, light estimation
- **ARCore (for Android)**
  - Introduction to ARCore
  - Setting up ARCore in Unity
  - Working with ARCore features: Environmental understanding, motion tracking, light estimation

Vuforia Engine

- **Introduction to Vuforia**
  - Vuforia features and capabilities
  - Setting up Vuforia in Unity
- **Image and Object Recognition**
  - Implementing image targets and object targets
- **Markerless AR**
  - Ground plane detection and tracking

Advanced AR Development

- **Creating Interactive AR Experiences**
  - Adding interactivity: Touch and gesture recognition
  - Integrating animations and sounds
- **User Interface in AR**
  - Designing user-friendly AR interfaces
  - Best practices for AR UX/UI design

AR and 3D Modelling

- **3D Asset Creation and Optimization**
    - Basics of 3D modelling
    - Importing and optimizing 3D models for AR
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- **Using External Tools**
    - Integration with tools like Blender or Maya

AR Project Development

- **Project Planning and Management**
    - Ideation and conceptualization
    - Designing AR experiences
- **Prototyping and Development**
    - Building a prototype
    - Iterative development process

Testing and Deployment

- **Testing AR Applications**
    - Techniques for testing AR applications
    - Debugging common AR issues
- **Deployment**
    - Preparing AR apps for deployment
    - Publishing AR apps on App Store and Google Play
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Future Trends in AR

- **Emerging Technologies in AR**
    - AR Cloud
    - Persistent AR
    - AR in wearables
- **Career Opportunities in AR**
    - Job roles and skills required
    - Building a portfolio in AR development