

Applications and Future of UXD

Module 5

116U01E734

User Experience Design

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Applications and Future of UXD

- Introduction to Augmented Reality (AR) and Virtual Reality (VR)
- UXD and XR
- Present and Future of XR.

Introduction to AR-VR

- **Augmented Reality (AR)**
 - adds digital elements to the real world and projects them onto line of sight.
 - allows workers to view 3D models and project information at a job site.
 - superimposes computer-generated enhancements onto an existing reality to make it more meaningful.

Introduction to AR-VR

- **Virtual Reality**

- a digital technology that uses software to generate realistic images, sounds, and other sensations replicating a real or imaginary environment
- This technology immerses the user by making them feel like they are experiencing simulated reality firsthand, stimulating their vision and auditory perception.
- replaces the real world with a simulated one in 3D
- one can experience a simulation of a factory you've designed—with machines running—all before it's built.

Introduction to AR-VR

- **Applications of AR-VR**
 - **Conceptual Design**
 - Designing in 3D helps you understand the overall scale, view how design changes in real-time, and experience your design as if it has already been built.
 - **Design Review**
 - Eliminate expensive and time-consuming physical prototypes from the design review process by visualizing at scale in 3D.
 - **Training & Simulation**
 - With VR, users can train in dangerous and complex environments, practicing their skills within the safety of a virtual world.

Introduction to AR-VR

- **Applications of AR-VR**
 - **Immersive Storytelling**
 - AR and VR can help you tell immersive and engaging stories about your design, product, or game. As you market your project, customers can give feedback in real-time.
 - **Remote Systems Control and Analysis**
 - With VR, one can remotely monitor, control, and analyze dangerous or inconveniently located systems from a safe environment.

AR-VR For UxD

- More than just offering interactive and attractive interfaces.
- it means designing immersive and smooth experiences that attract users
- By integrating digital data with the user's environment in real time, creating a higher level of interaction.

Influence of Augmented Reality and Virtual Reality in UX Design

● Enhanced Engagement.

- AR and VR technologies provide immersive experiences that catch the user's attention.
- This higher level of engagement can lead to more meaningful interactions with services, products, or data.

● Awareness Interactions.

- AR and VR allow designers to create interfaces in a tridimensional space.
- It makes interactions more natural and intuitive, where users can handle digital elements in a way that reflects real-world actions.

AR-VR For UxD

Influence of Augmented Reality and Virtual Reality in UX Design

- **Simulated Environment**
 - Designers can create virtual prototypes or test usability in simulated AR and VR environments.
 - It allows to receive early user comments and help identify design flaws before a product hits the market.
- **Contextual Delivery.**
 - AR highlights for superimposing digital data on the real world.
 - It can provide users with relevant real-time data or instructions, enhancing their comprehension and decision-making.
- **Adaptive Experiences.**
 - Both technologies can use sensors and Artificial Intelligence to collect data about user behavior, preferences, and environments.
 - This data allows personalization, providing content and interactions that are highly relevant to users.

AR-VR For UxD

Influence of Augmented Reality and Virtual Reality in UX Design

- **Visualization and Communication**
 - Virtual Reality serves in data visualization, allowing users to interact with complex data sets in an immersive environment.
- **Accessibility and Inclusivity.**
 - Both technologies can adapt to different needs in accessible ways to provide new guides for people with disabilities to interact with digital content without problems.
 - The goal is to achieve a great level of inclusion without limitations.

UxD and XR

Present and Future of XR

References

- <https://microsolresources.com/tech-resources/article/introduction-to-augmented-virtual-mixed-reality/> last accessed on October 15, 2024
- <https://www.wearecapicua.com/blog/ar-vr-ux-design#ar-and-vr-for-user-experience-design> last accessed on October 18, 2024