



SNS COLLEGE OF TECHNOLOGY COIMBATORE -35

MULTIGEN IN VIRTUAL REALITY



INTRODUCTION

- Multigen, short for "multigenerational“, in the context of virtual reality (VR), typically refers to experiences or applications designed to be enjoyed by people of different age groups. This can include VR games, educational content, or simulations that cater to a wide range of users, from children to seniors.
- The goal is to create immersive VR experiences that are accessible and engaging for individuals of all generations. This can be achieved by considering factors like ease of use, content appropriateness, and interaction mechanics to ensure that the VR environment is inclusive and enjoyable for everyone.



BENEFITS

- Inclusivity
- Broad Appeal
- Educational Value
- Interactivity
- Family Bonding
- Cognitive Simulation
- Physical Activity
- Empathy building
- Entertainment
- Flexibility
- Customization
- Longevity



Challenges

- Creating inclusive VR experiences presents several challenges, as the goal is to make the content accessible and enjoyable for a diverse range of users with varying abilities, backgrounds, and preferences.
- The design and development of inclusive VR experiences requires a thorough understanding of the needs and preferences of diverse user groups, along with a commitment to providing a positive and accessible virtual reality environment for all.
- While virtual reality holds great potential for inclusivity, there are also challenges that need to be addressed. One such challenge is the cost of VR equipment, which can be prohibitive for many individuals and institutions.



DESIGN CONSIDERATION



- Accessability
- Content Appropriateness
- Interactivity
- Learning and Education
- Storytelling
- Safety
- Graphics and Performance
- Cross-Generational Play
- Cultural Sensitivity
- Customization
- User Testing
- Memory Preservation



USER INTERFACE

- **Intuitive Design:** Create a user interface that is intuitive and easy to navigate, especially for those who may not be tech-savvy. Use simple and clear menu systems.
- **Customization:** Allow users to adjust settings like font size, contrast, and button placement to accommodate individual preferences and potential age-related visual or motor challenges.
- **Guided Tutorials:** Provide interactive and guided tutorials to help users of all ages become familiar with the interface and controls.



CONTROLS

- **Simplified Controls:** Offer a range of control options, including motion controllers, gamepads, and gesture-based controls. Ensure that users can choose the control method that suits their abilities and preferences.
- **Adjustable Sensitivity:** Allow users to adjust the sensitivity and responsiveness of controls to cater to different skill levels and physical abilities.
- **Physical Comfort:** Consider the physical comfort of users. Some older individuals may have mobility issues, so ensure that the controls are not overly demanding in terms of movement.



CONTENT APPROPRIATENESS



- **Age Ratings:** Clearly label and rate VR content based on age appropriateness, similar to movie or video game ratings. This helps users make informed choices.
- **Family-Friendly Options:** Create content that is family-friendly and suitable for all ages. This can include educational experiences, virtual tours, or social activities.
- **Content Variety:** Offer a diverse range of content to cater to the interests of different age groups, from educational and historical experiences to games and entertainment.
- **Feedback Mechanisms:** Encourage user feedback to continuously improve content appropriateness. Listen to user suggestions and make adjustments as needed.



EMERGING TECHNOLOGIES



- **Immersive Realism:** Advances in hardware and software are making VR experiences more immersive. High-resolution displays, improved haptic feedback, and realistic physics simulations will create more engaging and lifelike experiences that appeal to users of all ages.
- **5G and Cloud Streaming:** The rollout of 5G networks and cloud gaming services will allow for seamless streaming of VR content. This means that users won't need powerful local hardware, making VR more accessible to a wider audience.



EMERGING TECHNOLOGIES



- **Social VR:** The development of social VR platforms will allow multigenerational users to connect and interact in shared virtual spaces. This is especially valuable for distant families and friends who want to engage in virtual gatherings and activities.
- **Health and Wellness Applications:** VR can be used for health and wellness purposes, including physical therapy, cognitive training, and stress reduction. These applications will cater to users of all ages, from seniors seeking cognitive exercises to young adults interested in fitness.

Thank You!