

A Virtual Tour Around the Wildlife Sanctuaries

Metaverse Internship Project



SUBMITTED BY:

TEAM REALITY REWIRED

Bhumika Gupta

Shreya Sisodia

Nishtha Karwal

SUBMITTED TO:

SteamEdu

Dept IT, IGDTUW

TABLE OF CONTENTS

1. OBJECTIVE
2. INTRODUCTION
3. SCENE DESCRIPTION
4. KEY FEATURES
5. METHODOLOGY
6. IMPLEMENTATION
7. CONCLUSION
8. INFERENCES
9. LIMITATIONS AND FUTURE INCORPORATIONS
10. REFERENCES
11. TEAM DETAILS

OBJECTIVE

The primary objective of "A virtual tour around the wildlife sanctuaries" is to create an innovative and immersive virtual reality project that offers users a captivating tour through forests or wildlife sanctuaries. *Birds chirping and water shimmering in mellow sunlight, the home to green lush nature – the Sundarbans wildlife sanctuary. It is India's one and only place where one of the most significant environmental and geographical marvels can be witnessed!*

INTRODUCTION

A wildlife sanctuary is an area where animal habitats and their surroundings are protected from any sort of disturbance. The capturing, killing and poaching of animals is strictly prohibited in these regions.

They aim at providing a comfortable living to the animals. India has beautiful wildlife sanctuaries, with dense forests, large rivers, high and beautiful mountains.

When it comes to wildlife sanctuaries and national parks, India has plenty of them. It is the royal abode of unique species of flora and fauna. These parks are specially taken care of by the government, in order to charm lots of tourists. Exciting jeep rides, adventurous night safaris, audio-visual facilities as well as convenient transport systems attract many foreigners too. Another plus point of these sanctuaries is that they are adorned with glittering lakes reflecting pure scenic beauty.

SCENE DESCRIPTION

The virtual reality scene in "sanctuary VR" is thoughtfully designed to offer an authentic and engaging experience of the tour across the sanctuary:

A wildlife sanctuary is an area where animal habitats and their surroundings are protected from any sort of disturbance. The capturing, killing and poaching of animals is strictly prohibited in these regions.

They aim at providing a comfortable living to the animals. India has beautiful wildlife sanctuaries, with dense forests, large rivers, high and beautiful mountains.

Importance of Wildlife Sanctuaries

There are a number of reasons for establishing wildlife sanctuaries. Some of the reasons are listed below:

- The wildlife sanctuaries are established to protect the endangered species.
- It is quite difficult to always relocate the animals from their natural habitat, therefore, protecting them in their natural environment is advantageous.
- The endangered species are specially monitored in the wildlife sanctuaries. If they reproduce and grow in number while under protection, few specimens can be kept for breeding in the conservation parks for their survival.
- Biologist activities and research are permitted in the wildlife sanctuaries so that they can learn about the animals living there.
- A few sanctuaries take in injured and abandoned animals and rehabilitate them to health before releasing them in the forest.
- Wildlife sanctuaries preserve the [endangered species](#) and protect them from humans and predators.

KEY FEATURES

"A virtual reality through wildlife sanctuaries" boasts several key features that elevate the experience to unparalleled heights:

Protection of Endangered Species

Many species of plants and animals are on the verge of extinction. Such creatures are conserved in the wildlife sanctuaries. Various sanctuaries have been established such as the Fleurieu peninsula sanctuary is maintained to protect sheoak habitat for glossy black cockatoos.

Conservation of Biodiversity

The landowners of a wildlife sanctuary are involved in:

- Production and distribution of electricity.
- Horticulture, grazing and farming enterprises
- Wine production
- Organic horticulture

Ecotourism

Many sanctuaries are involved in ecotourism. They offer accommodation, tour guides, nature walks, etc.

Education and Public use

The sanctuaries that are created on public land are involved in public use along with the conservation of biodiversity. For eg., golf courses, picnic areas, lakes for boating and swimming.

Thus we know that a wildlife sanctuary is one of the finest ways of preserving the

endangered species.

METHODOLOGY

The development of "A virtual tour through wildlife sanctuaries" involves a well-structured and iterative methodology that combines technical implementation, design considerations, and educational content integration. The following steps outline the methodology adopted for the project:

- **Project Planning and Scope Definition:** The project starts with a comprehensive planning phase, where the team defines the project's objectives, scope, and target audience. Clear goals are set, and the historical eras to be represented are identified. The team also outlines the specific interactive elements, educational insights, and user interactions to be incorporated into the VR experience.
- **Research and Historical Accuracy:** Extensive research is conducted to ensure historical accuracy in the design and representation of the wildlife and endangered species. Historical documents, archaeological findings, and expert resources are consulted to create authentic and realistic environments for each species.
- **Scene Design and Modeling:** The 3D scene design is initiated, encompassing the creation of forests and wildlife environments. A-Frame's capabilities are utilized to model trees, bears, vegetation, and other elements characteristic of a sanctuary.
- **Interactive Elements Implementation:** The interactive elements, such as the portal through forests, are implemented using HTML, CSS, and JavaScript. These elements enable smooth transitions between sanctuaries ensuring a seamless tour experience for users.
- **Educational Content Integration:** Informative panels and educational content

are integrated into the VR environment. These panels are designed to provide historical insights, technological advancements, and cultural context, enhancing the educational value of the project.

- **User Interface and Controls:** An intuitive and user-friendly interface is designed to ensure ease of navigation and interaction within the VR environment. Cursor-based controls or hand controllers are integrated to enable users to interact with elements and explore the scenes.
- **Testing and Iteration:** Extensive testing is conducted to identify and resolve bugs, ensure optimal performance, and enhance user experience. User feedback is collected to make improvements and iterate upon the project's design and functionality.
- **Documentation and Educational Resources:** Comprehensive documentation is created to provide instructions for users, explain historical context, and guide users through the interactive elements. External educational resources may also be linked to enrich the user's learning experience.

IMPLEMENTATION

The implementation of "A virtual tour through wildlife sanctuaries" involves several key components:

- **Scene Design and Modeling:** Detailed 3D modeling and scene design are crucial to create historically accurate representations of the sanctuary and the species which are extinct. This includes designing trees, forest environment, vegetation, and other elements to match the characteristics of sanctuary.

- **Interactive Elements:** Interactive elements, such as the portal through forests are implemented to enable seamless transitions between the sanctuaries .
- **Educational Content:** Historical information panels are incorporated into the scene to provide educational insights about the technological advancements and cultural practices of the species present. Well-researched content is integrated into the panels to offer accurate and informative details.
- **User Interface and Controls:** The user interface is designed to be intuitive and user-friendly, enabling users to navigate through the VR environment and interact with the interactive elements using cursor-based controls or hand controllers.
- **Testing and Iteration:** Extensive testing and iteration are conducted to ensure a seamless and bug-free experience. User feedback is collected to make improvements and refine the project based on user preferences and expectations.
- **Documentation and Educational Resources:** To add educational value, well-researched documentation and educational resources related to the historical context are provided within the VR environment or on external platforms.

Overall, the successful implementation of "A virtual tour through wildlife sanctuaries" relies on the meticulous integration of historical accuracy, engaging gameplay, educational insights, and immersive virtual reality technologies, delivering a captivating and enlightening tour experience for users.

CONCLUSION

"A virtual tour around the wildlife sanctuaries" is more than just a virtual reality project; it is a captivating and enlightening expedition through the different extinct and endangered species in forests . By artfully merging interactive gameplay, historical accuracy, and educational insights, the project invites users to engage deeply with the Wildlife sanctuaries which are a country's natural wealth and they come with a host of different advantages both to mankind and the environment, and thus they need to be protected at all costs.

LIMITATIONS AND FUTURE INCORPORATIONS

As a continuously evolving project, "A virtual tour around wildlife sanctuaries" leaves the door open for exciting future enhancements:

- **Additional Historical Eras:** Expanding the project to encompass additional pivotal historical periods will provide users with an even broader perspective on the evolution of extinct species , from antiquity to the potential glimpse of the future.
- **Narrative Storytelling:** Infusing the project with narrative storytelling elements can offer a captivating and emotionally resonant experience, making users emotionally invested in the lives of different species and their past lives.
- **Multiplayer Interaction:** Incorporating multiplayer features can foster collaboration and social interaction, allowing users to share the tour experience and collectively explore history together.
- **Extended Educational Content:** Expanding the educational content, such as historical documents, artifacts, and expert commentary, can deepen the learning experience and make "A virtual tour around wildlife sanctuaries" an invaluable tool for educational institutions.

INFERENCES

- **Understanding Historical Context:** Users will gain a deeper understanding of the historical context surrounding the different extinct species. By exploring the interactive elements and historical information, they will grasp the challenges, innovations, and societal aspects that shaped these distinct periods.
- **Comparing Technological Advancements:** The juxtaposition of the wildlife sanctuaries will enable users to compare and contrast technological advancements. They will observe how sanctuaries have significantly transformed wildlife, paving the way for progress and improved living conditions of some endangered species.
- **Appreciating Human Resilience:** By observing the resourcefulness of wildlife communities in utilizing firewood and trees for survival, users will appreciate the resilience and ingenuity of ancient civilizations in adapting to their environments and ensuring their survival.

ACKNOWLEDGEMENTS

We extend our heartfelt gratitude to the A-Frame development community for providing the robust platform that brought "A virtual tour around wildlife sanctuaries" to life. Additionally, we appreciate the dedication and commitment of our team members, whose collective efforts have shaped this compelling and enlightening VR project.

REFERENCES

- A-Frame Documentation: <https://aframe.io/docs/1.2.0/introduction/>
- <https://www.wildcatsanctuary.org/about/sanctuary-tour/>
- <https://bestfriends.org/sanctuary/virtual-reality-tour>

TEAM DETAILS

- Bhumika Gupta , AI ML'26, IGDTUW, (Email ID: bhumikag0110@gmail.com ,
GitHub Profile: <https://github.com/Bhumikagupta-110>)
- Shreya Sisodia, AIML 26, IGDTUW , (Email ID: shreyasisodia5401@gmail.com ,
GitHub Profile: <https://github.com/shreya5401>)
- Nishtha Karwal , AIML 26, IGDTUW , (Email ID: n.karwal004@gmail.com ,
GitHub Profile: <https://github.com/Nishtha1204>)