IMAGE DETECTING AND PROCESSING VUFORIA USING UNITY

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ABSTRACT

Many visitors will not have knowledge of all the artefacts in the museum; only a few will, but many of us will not, and any person in the museum who will lead us will not be certain they have knowledge of them. So, by illustrating the object with analysis video and audio from a knowledgeable individual, we can learn about that specific object, sculpture, or ancient painting, for example. That's where our Vuforia comes in; it'll also tell you about the background of an object found by image processing. It is possible to view the research video using unity by fixing the video on the targeted image. Also, the video can be shown in a 3D angle; the only requirement is that they use a cell phone to communicate with Unity. Augmented reality is a technologically enhanced version of the natural world that is achieved by the use of digital visual objects, sound, or other sensory stimuli. It's a growing trend among businesses that deal with mobile computing and business applications. Vuforia is a mobile augmented reality software development kit that allows for the production of augmented reality applications. The primary goal is for the consumer to acquire information about an entity from our past world.

Keywords: Augmented reality, unity, Vuforia, image processing

I. INTRODUCTION

In general, many augmented reality devices are available for visiting locations such as museums and art galleries. However, they lack the most important function, which is interactivity. This interactivity aids the user's understanding of the unity. Rather than just sitting and swiping the app, our system allows the user to roam the real world while navigating the virtual one. Furthermore, not only can the user gain information, but it will also assist the user in seeing the video and hearing the audio for their experience. As a result, when they work together, the user's immersive experience will be enhanced.

II. LITERATURE SURVEY

There are several museum apps available, such as the Chennai museum app, but these applications depend on the internet to function. The majority of the applications are only used to book tickets, while some have an illustration of an object as well as a written description.

In some museums, the guide does not include all of the information about the piece. As a result, tourists will be disappointed. People do not have access to information about our world's past history.

In some museums the guide will not know the full details about the object. So, visitors will get disappointed with them. The people have not getting knowledge about our world’s past history.

III. PROPOSED SYSTEM

The virtual screen will be placed in the real world, and the user will be able to communicate with it. As a result of using the VUFORIA SDK, IMAGE TARGET will be easy. Since there is no complex UI embedded, new users may communicate with ease.

Architecture:
IV. MODULES IN THE PROPOSED SYSTEM

i. UNITY GAME ENGINE:
Unity is a cross-platform game development engine created by Unity Technologies that can be used to create PC and mobile games as well as AR, VR, and MR applications.

ii. VUFORIA DEVELOPERKIT:
Vuforia is a mobile augmented reality software development kit (SDK) that allows developers to create augmented reality apps. It recognises and tracks planar images and 3D objects in real time using computer vision technology.

iii. TARGET MANAGER:
Create and maintain databases and goals with the Target Manager.

iv. RIGID BODY:
It's a feature in the Unity game development engine that allows a Game Object to react to real-time physics in the real world.

v. VIDEO TRACKABLE HANDLER:
This is the code that will show the targeted video on the mobile device's screen, as well as play the audio from the targeted file.

vi. PRO BUILDER:
It is a UNITY asset that is used to create the virtual 3D video that is shown on the object.

vii. ANDROID STUDIO:
Based on JetBrains' IntelliJ IDEA software and developed specifically for Android production, Android Studio is the official integrated development environment for Google's Android operating system.

viii. VISUAL STUDIO:
Microsoft Visual Studio is a Microsoft integrated development environment. It's used to make blogs, web applications, web services, and smartphone apps, among other things.

V. ADVANTAGE OF PROPOSED SYSTEM

- Cutting-edge technology
- Economical
- User-driven
- Internet is not needed
VI. RESULT

We can conclude that our system can provide knowledge of the world's past history through museum artefacts. We created a user-friendly Android application to view a specific research video on an object. As a result, we will learn from the interactive guide.

VII. CONCLUSION

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REFERENCES


