MUSEUM TOUR GUIDE

Brian Musarafu Software Engineering Department

Harare Institute of Technology
success through innovation

1.0 Abstract

Mobile devices have become more popular and convenient with the introduction of new features. Mobile apps now support consumers in various ways, including assisting with daily activities. Augmented reality (AR) has gained importance in everyday life due to advancements in smartphone and cellular technology. AR integrates virtual and real environments on smartphones, overlaying computer-generated images onto the physical world. It is now a key component of mobile solutions, along with Position Dependent Services. Augmented reality smartphone apps offer an enhanced user experience by providing detailed location information and allowing users to view and interact with their surroundings. This project focuses on developing an augmented reality museum tour guide application that utilizes AR technology. It involves creating a normalized database to store artifact information and designing a user-friendly mobile app. The application enables visitors to access artifact details, 3D images, and AR renderings, enhancing their museum experience.

2.0 Introduction

Advancements in information and communication technology have revolutionized the way tourists access information and plan their activities. Smartphones, with their widespread usage worldwide, have become essential tools for travelers. Mobile technology and apps have found great suitability in the tourism industry, just like other communication technologies.

The project aims to develop a museum tour guide application that utilizes augmented reality to enhance the visitor's experience. By employing augmented reality technology, the app uses the smartphone camera to detect artifacts, overlaying them with 3D models and titles. Users can then access detailed information about the artifacts and explore further. The integration of augmented reality in museums has the potential to transform traditional museum experiences and pave the way for future interactive applications.

3.0. Problem definition

Advancements in technology have transformed how tourists access information and plan their activities. Smartphones are now essential for travelers worldwide. The project focuses on creating a museum tour guide app that utilizes augmented reality to enhance the visitor experience. By using the smartphone camera, the app detects artifacts and overlays them with 3D models and titles. Users can access detailed information and explore further. This integration of augmented reality in museums has the potential to revolutionize traditional museum experiences and pave the way for interactive applications in the future.

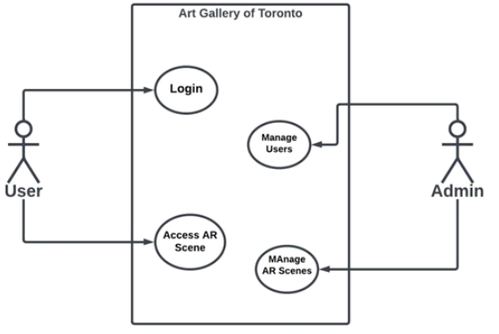
4.0. Objectives

To develop a mobile application that :

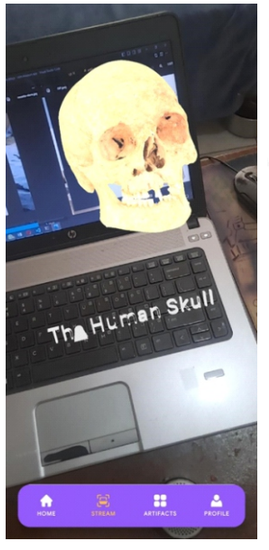
- allows users to search for items they want to explore in the museum.
- detect images and give full information to user.
- allows visitors to find relevant adequate information about items listed in the museum.

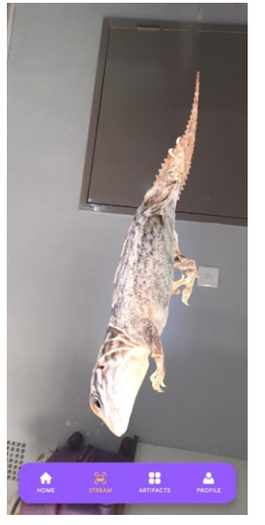
5.0. System Architecture

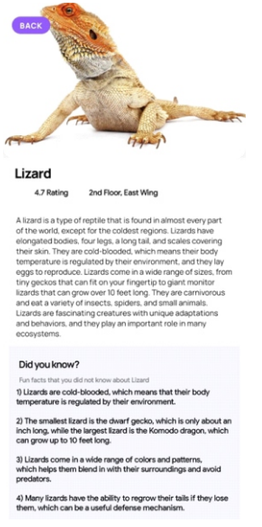
6.0 Use case



7.0 Screenshots







8.0 Conclusion

In conclusion the mobile application has managed to bridge the gap between visitors and artifacts in the museum by providing adequate information to visitors. It also managed to use augmented reality effectively by helping visitors to have navigation through the museum artifacts and give them a better experience as they view artifacts in 3D using augmented reality.