



# A Study on Impact of Augmented Reality in the Hospitality Sector

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## Abstract

*Hospitality industries are expected to create a new experience due to the customer behavior and based on their preference today. In previous days hospitality industries has work with mostly depended on staff printed menu and brouchers to provide information and all the customer had similar experiences, with not much to make it personal or fun. So, the hotel industries decide implement to their AR technology which helps interactive and visually rich experiences, making things easier and more enjoyable for both customer and employees. The present study aims how AR technology helps hotels industries offer more personal and interactive services to customer. The study is based on the secondary data has been used. The findings shows that AR creates better experiences for customers and help hotels to become more innovative in the way they work and serve the people.*

**Keywords:** hotel industries, AR technology, customer, experiences

## Introduction

The hotel industry worked before AR technology, they provide printed brouchers and paper menus to give information about rooms, facilities and food items. Customers had to imagine how a dish looked or what a room might be feel like. At the same time booking only website or phone calls. There was no immersive or tech-based experience. The recently AR technology has to help the hotels give guests a more personal and interactive experience by showing 3D room views, virtual menus and local guides throw app or devices making the service more engaging and tailored to each guest needs. Customers can easily access this technology using mobile phones to access the information about the food

menu, place, room space, near by road way go to any shops all the details get quickly to access this technology.

## Review of Literature

**Nur Azlina Mohamed Mokmin (2020)<sup>1</sup>** has conducted Augmented Reality information for food (ARIF): Design and Development. The aim of the study was to design, develop and test the usability of an AR food information app. The major finding of this research most of the respondents (17) found that the app successfully helped them know the food calorie information.

**Ahmad Solihin. Siti Nur Azizah, Sutomo (2024)<sup>2</sup>** has examined Implementation of Virtual



Reality (VR) And Augmented Reality (AR) in Marketing and Service Development to Increase Customers in The Hospitality Sector. The purpose of the study to evaluate the effect of implementing virtual reality (VR) and augmented Reality (AR) on customer satisfaction in the hospitality sector. The tools used in the study are multiple regression after going through the classical assumption test. The major findings of the study 72% of the respondents stated that virtual tours through VR helped increase booking confidence. In comparison, 64% reported that AR enriched the stay experience with interactive real time information.

**Alfatma Fathalla Salama Ali, Nourhan wael Anter Ibrahim (2025)**<sup>3</sup> has evaluated the application of Artificial Intelligence (Virtual Reality and Augmented Reality) as a Training Tool in the Hospitality Industry. The objective of the study to increase the knowledge and skills of trainers and specialties enabling them to implement AI technology in training applications effectively. The tools like ANOVA have been used in this study. The major findings of the study are indicate the significant investment in developing technological and informational infrastructure support adopting VR technology in training contexts.

## **Applications of AR in Hospitality Service Innonation**

### **AR allowed Room PREVIEWS**

The hotels use their AR technology to give customers a 3D preview of their rooms before booking. The customer scanning a broucher, Printed image or using an app or website to view the full room design including the bed, furniture, bathroom and even the window view right on their phone screen. This interactive experience builds trust and confidence to make their decision in a customer whether the room has booking or not.

### **AR Customer Services**

AR apps and smart mirrors to provide customers with quick and helpful information during their stay. These technology helps the customer to view nearby tourist attractions and directions, access translations

in their preferred language and order food or services directly from their room. This technology makes the overall guest experience faster, more convenient and more enjoyable. It helps to avoid the call for common services or information.

### **AR Interactive Menus**

AR technology to make the dining more fun and comfortable. The customer can scan the menu with their phone or tablet and see 3D pictures of the food items. They also get useful details like what ingredients are used, how many calories in the food has to identify based on the chef suggestions. It helps the customer to choose their food more easily and enjoy a better dining experience, whether they eat in the restaurant or in their room.

### **AR Based Staff Training**

AR technology helps to train their staff by showing real life practice scenes. Workers learn to handle guests, clean rooms and follow safety steps. This makes training easier, more fun, time saving and perfect handling to the customer.

### **Virtual Event Planning**

Hotel use AR technology to help the clients see how a banquet hall or conference room will look before the event happens. By viewing the setup in real time through a phone or tablet, clients can make better choices, avoid mistakes, and feel more satisfied with the final arrangement.

### **Benefits of AR as a Service Innovation**

#### **Enhanced Customer Experience**

AR tools helps the hospitality industries to feel the customer a more personal and enjoyable experience. By using fun and interactive features, guests feel more connected and satisfied, which improves the overall quality of service.

#### **Operational Efficiency**

AR tools helps the hotel staffs to save the time by handling common tasks like showing guests how to reach their rooms or answering basic questions. This lets employees focus on more important due.



### **Competitive Differentiation**

AR application in hotel industry look modern and customer focused. This helps them to stand out from other hotels and attract more tech savvy customers.

### **Increased Revenue Opportunities**

AR technology use the hotels to make their foods in a 3D preview rooms or spa services, It help to encourages the customers buy more and making the offers more attractive and clearer.

### **Challenges and Barriers**

Implementing Augmented reality in hotels comes with some challenges

### **High Implementation Costs**

High cost of developing and setting up AR systems, especially for small or budget hotels. Creating custom AR experiences, training staff and maintaining the technology can require a large investment.

### **Technological Limitation**

AR Systems often need a strong internet connection, modern smartphones or tablets and access to skilled technical support. Without these, the AR features may not work smoothly, leading to poor guest experiences.

### **Guest Technology Readiness**

Not all guests are familiar or comfortable with using AR apps, especially older guests or those who are not used to modern technology. This can limit the effectiveness of AR features and reduce guest engagement.

### **Integration with Legacy Systems**

In addition, many hotels still use older legacy systems for managing bookings, staffs and services. These systems may not work well with new AR platforms, making it difficult to fully integrate AR into daily hotel operations.

### **Implications and Recommendations**

#### **For Hotel Management**

It is best to begin with small scale AR features such as interactive menus or virtual room guides. This

allows hotels to test the technology and improve guest experience without large investments. Its also important to train staff so they can help guests use AR tools smoothly.

### **For Technology Developers**

Technology developers should focus on building scalable cloud-based AR platforms that work well on mobile devices. They Should also design these systems to be simple and user friendly, so even guests who are not familiar with technology can use them easily.

### **For Academics and Researchers**

There is a need for further studies to understand the long-term impact of AR on guest loyalty, customer satisfaction and return on investment in the hospitality sector. In addition, comparative research between different types of regions such as urban vs rural areas or developed vs developing countries is recommended. This would help reveal how AR adoption and effectiveness vary based on location, infrastructure and guest behavior, offering deeper insights for global application.

### **Conclusion**

The integration of Augment reality in the hotel industry represent to adapt the new technology for interact the customer. It helps to improve their industries compare than the other hotels. Customers are also enjoying to access this technology. Hence the study focused on how AR technology helps hotels industries offer more personal and interactive services to customer. Although challenges exist, the benefits in customer satisfaction, branding and service efficiency make AR a transformative tool in modern hospitality.

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