

DESIGNING AUGMENTED REALITY TOOLS FOR ENHANCING ART GALLERY AND MUSEUM VISITORS EXPERIENCE: A SYSTEMATIC REVIEW OF CURRENT TRENDS

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ABSTRACT

The use of augmented reality (AR) for museums and art galleries (MAG) has expanded rapidly over the last few decades. However, no systematic analysis of the latest developments in the research and design of AR for MAG has ever been conducted. Thus, this article conducts a systematic analysis of the literature for the period 2018–2020. The basic methodology for this analysis is Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). We found 2355 records using popular Scopus database. However, our review included only 12 final journal articles that met the inclusion criteria. The findings indicate that AR for MAG has been steadily increasing over time. Our synthesized study's evidence-based findings suggest future potential implication on how to improve the design of AR for MAG.

Keywords: Systematic literature review; Virtual Museum, Museum visitor, Museum exhibits.

1. INTRODUCTION

Over the last few decades, the usage of augmented reality (AR) in museums and art galleries (MAG) has grown exponentially. Its sole objective is to present visitors with the best possible experiences (Kristensen et al., 2021). As a result, numerous studies have been conducted to enhance museum visiting experience (Kristensen et al., 2021), motivation (Vareiro et al., 2021) and behaviour (Liu et al., 2020). The advancement in AR enables art galleries and museums to offer more innovative solutions for making visitor experiences memorable.

AR is triggered by scanning the trigger image, which is defined as the marker. It enables us to 'see' the real-world artefacts while physically being there (Ahmad & Junaini, 2020). AR works by superimposing or augmenting the digital contents onto the physical world. It is like creating a bridge between the real and virtual worlds. It removes the barrier between two worlds by extending the physical world through added virtual layer. AR works in real-time and involves interactive display to view the augmented 3D graphics (Liao, 2019). Actually AR does not create virtual world nor replacing the physical world, instead it enriches and complements the real world (Kiryakova et al., 2018). Adding the virtual layers into physical world creates intuitive interaction between them.

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