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ENHANCING TOURIST'S EXPERIENCE IN TOURISM BY DEVELOPING OF AUGMENTED REALITY ON HERITAGE STREET ART



By

FADIA SEKAR ISMUNING

**POLITEKNIK
NEGERI
JAKARTA**

Project Submitted in Partial Fulfillment of the Requirements for the Degree of Bachelor in Creative Multimedia (Hons.) in the Faculty of Information Sciences and Engineering

June 2023



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ENHANCING TOURIST'S EXPERIENCE IN TOURISM BY DEVELOPING OF AUGMENTED REALITY ON HERITAGE STREET ART

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ABSTRACT

Heritage is something that can be passed from one generation to generation, something that can be conserved or inherited, and something that has historic or cultural value. In this era, digital technology can be a solution in the tourism sector during these days. Since there are no signs directing towards to the heritage street art in Central Market, a smartphone is all that is needed to access the Augmented Reality application for digital tourism, especially in regard to the heritage street art. Using a quantitative data method, researcher collecting data and analyzing numerical data. The main findings that can be obtained from this research is, Augmented Reality can build using ADDIE methodology, and used for tourist's who want to enhance their experience in tourism. However, there are lacking of research, promotional technology, and also application that develop the augmented reality to enhance tourism in heritage street art, related to the Central Market of Kuala Lumpur. Therefore this research is to assist the cultural heritage of street art, and also for promoting heritage and cultural street art through Augmented Reality. The result of this project is to create attractive Augmented Reality for tourist's who want to enhance their experience in tourism industry. As a result, this project provides a tourism experience for tourists especially in heritage street art by using marker-based augmented reality. By providing information related to the building itself, as well as sound, it makes augmented reality interactive. This study shows how this project can help tourists in enhancing the tourism experience, helping tourists to recognize heritage street art around the central market, and also as a promotion for the heritage street art.

Keywords: Augmented Reality, Heritage Street Art, Tourism, Technology

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ABSTRAK

Warisan ialah sesuatu yang boleh diwarisi daripada satu generasi ke generasi, sesuatu yang boleh dipelihara atau diwarisi, dan sesuatu yang mempunyai nilai sejarah atau budaya. Pada era ini, teknologi digital boleh menjadi penyelesaian dalam sektor pelancongan pada zaman ini. Memandangkan tiada tanda yang menghalau ke seni jalanan warisan di Central Market, telefon pintar adalah satu-satunya yang diperlukan untuk mengakses aplikasi Realiti Augmented untuk pelancongan digital, terutamanya berkaitan dengan seni jalanan warisan. Menggunakan kaedah data kuantitatif, penyelidik mengumpul data dan menganalisis data berangka. Penemuan utama yang boleh diperolehi daripada penyelidikan ini ialah, Augmented Reality boleh dibina menggunakan metodologi ADDIE, dan digunakan untuk pelancong yang ingin meningkatkan pengalaman mereka dalam pelancongan. Walau bagaimanapun, terdapat kekurangan penyelidikan, teknologi promosi, dan juga aplikasi yang membangunkan realiti tambahan untuk meningkatkan pelancongan dalam seni jalanan warisan, yang berkaitan dengan Pasar Besar Kuala Lumpur. Oleh itu penyelidikan ini adalah untuk membantu warisan budaya seni jalanan, dan juga untuk mempromosikan warisan dan seni jalanan budaya melalui Augmented Reality. Hasil daripada projek ini adalah untuk mewujudkan Augmented Reality yang menarik untuk pelancong yang ingin meningkatkan pengalaman mereka dalam industri pelancongan. Hasilnya, projek ini memberikan pengalaman pelancongan kepada pelancong terutamanya dalam seni jalanan warisan dengan menggunakan realiti tambahan berasaskan penanda. Dengan menyediakan maklumat yang berkaitan dengan bangunan itu sendiri, serta bunyi, ia menjadikan realiti tambahan menjadi interaktif. Kajian ini menunjukkan bagaimana projek ini dapat membantu pelancong dalam meningkatkan pengalaman pelancongan, membantu pelancong mengenali seni jalanan warisan di sekitar pasar pusat, dan juga sebagai promosi untuk seni jalanan warisan.

Keywords: Augmented Reality, Heritage Street Art, Tourism, Technology

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The author realizes that the composition of this thesis is far from perfect and there are many shortcomings. Therefore, constructive criticism and suggestions are needed for the perfection of this thesis. The author hopes that this thesis can be easily understood and can bring benefits to readers.

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CHAPTER I INTRODUCTION

1.1 Project Background

Heritage is something that can be passed from one generation to generation, something that can be conserved or inherited, and something that has historic or cultural value. Heritage comprises of : the tangible - our historical sites, buildings, monuments, objects in museums, artefacts and archives (Howard, 2021). Street art and graffiti have been framed as items of cultural heritage in recent years, there has been no clear agreement on the definition or conceptualization of street art as heritage (Nomeikaite, 2017). Augmented Reality (AR) is increasingly used as a marketing, information and experience channel within the tourism industry (Cranmer et al., 2020).

Augmented Reality sometimes referred to as mixed reality, is a real-time interactive experience that display computer content over a real-world environment. In this era, Augmented Reality is one of solution for tourist's that want to recognize something but have a limited range in terms of distance and cost. With Augmented Reality, tourist's no longer have to visit a country just to explore a heritage or historical place. Based on the statement above, the project title "Enhancing Tourist's Experience in Tourism by Developing of Augmented Reality on Heritage Street Art" is initiated.

The purpose of this project is to help tourist's from various countries to explore tourism places, especially heritage places in a country. Website says that, Kuala Lumpur Central Market is the center point of Malaysian Culture, Arts and Crafts in the heart of the city. As a building that has significant historical value, the Central Market of Kuala Lumpur,



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has a long journey from its opening in 1888 to a delightful destination for tourist's, shoppers and also art lovers (CentralMarket.com.my, n.d.). Augmented Reality can automatically present a visual of all information about the buildings around Central Market of Kuala Lumpur. Of course, this can help tourist's learn more about the buildings around Central Market of Kuala Lumpur in real-time. The use of Augmented Reality technology can make it easier for tourist's to see and learn in more detail various information related to buildings around the Central Market of Kuala Lumpur. The best thing in the Central Market, is a unique shopping opportunity where they can relish not just a retail experience but also a heritage experience offering a wonderful visual treat and appreciation of Malaysia heritage and architecture. Central Market of Kuala Lumpur offers an excellent place to showcase the true Malaysian culture and heritage values attracting both locals and foreign tourist's.

This Augmented Reality is create for tourist's who want to enhance their experience in heritage tourism. Augmented Reality is used to directly see the surrounding of the heritage buildings around Central Market of Kuala Lumpur. By using Augmented Reality, tourist's can immediately feel the real environment heritage buildings around Central Market without having come to place directly. Tourist's can also learn the information that will be presented in Augmented Reality, using text, graphics and audio elements. One of the promotional media used is the use of printed brochures. Brochure is written information material about a problem that is compiled in one print. Contains only a few pages, folded without binding. The use of brochures as a promotional media has many advantages, it is simple but can be directly to the intended point to the costumer. By scanning the QR or



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marker on the brochure, users can immediately see and interact with the information buttons that will be appear on the screen app.

1.2 Problem Statement

- Lacking of information about historical or heritage buildings around Central Market of Kuala Lumpur.
- There is no directional signs to showing heritage buildings or street around the Central Market of Kuala Lumpur.
- Lacking of promotional heritage and cultural street art, there is no technology and application related to the Central Market of Kuala Lumpur.

1.3 Research Question

How to create attractive Augmented Reality to enhance the tourism experience for tourist's.

1.4 Objectives

- To assist the cultural heritage street art around Central Market of Kuala Lumpur through Augmented Reality.
- To develop an animated augmented reality with text, music, and graphics to increase the heritage street art around Central Market of Kuala Lumpur.
- To promote heritage and cultural street art of Central Market of Kuala Lumpur through Augmented Reality.



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1.5 Definition of Term

1.5.1 Tourist's

Tourist's are people who travel from their place of residence to visit other places or country, by enjoying the trip. Tourist's defines as people who carry out tourism activities, temporary visitors who stay at least 24 hours in the country visited. Types of tourist's as seen from the scope in which tour carried out, such as :

- a) Foreign tourists (foreign tourist's) is a foreigner who travels, who comes to a country other than the country where the tourist's resides.
- b) Domestic foreign tourist's namely foreign tourists who stay in a country to travel in the territory of the country where they live.
- c) Domestic tourist's namely a citizen who travels within the boundaries of his own country (Hantoro, 2015).

1.5.2 Tourism

In general way tourism can be defined as the temporary movement of the people to destinations away from their usual place or normal habitat, the activities entered upon during their stay in those destination and the facilities developed to provide their requirements / needs (drbramedkarcollege.ac.in, 2016).



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1.5.3 Heritage Street Art

Heritage is something that can be passed from one generation to generation. It has a historical and cultural value, such as books, buildings, arts, and etcetera. While street art is an art that is made in public places. Often seen on the large walls of the streets. And if combined, heritage street art can be said as a street that has a lot of historical buildings, and the history of the street itself. There are also some graffiti works that have their own meaning, but do not lead to legacy or traditional graffiti or murals.

1.5.4 Augmented Reality

Augmented reality is a technology that allows real-time integration of digital content created by computers. A combination of visual elements, sound, and other sensory stimuli and delivered via technology (Hayes, 2020). Augmented Reality allows users to see 2D or 3D virtual objects projected onto the real world.

1.6 The Scope of Project

This project will be in the form of a scan marker that will enhance tourism experience on Heritage Street Art. This Project will be executed in radius 2km around Central Market. Target audience for this project is for tourist's foreign and Indonesian tourist's who live or stay temporarily in Malaysia who is want to enhance explore their experience in heritage tourism by using Augmented Reality. This project will be run in Shah Alam, Malaysia.



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1.7 Significance of the Project

By the completion of this research, researcher can develop augmented reality with animation, text, and music background to make it complete. hopefully it can help the tourist's who wants to enhance their experience in tourism by using this Augmented Reality. This research is one of solution for people that want to recognize something but have a limited range in terms of distance and cost. Tourist's no longer have to visit a country just to explore a heritage or historical place. This research can be one of practical media media to help the community to navigate and development of the new experiences for transforming their cities. It also can help Governments Sector to provide a powerful educational experience to the tourist's and citizen alike, especially for the Heritage Street Art at Pasar Seni, Kuala Lumpur.

1.8 Assumptions and Limitations

Augmented Reality is useful to increase the interest of domestic and foreign tourist's especially exploring heritage street art in Central Market of Kuala Lumpur. By using this Augmented Reality, tourist's can understand and learn about the heritage streets around Central Market of Kuala Lumpur. With a very easy way of using this product, hopefully that this product can help tourist's in exploring heritage streets in the Central Market of Kuala Lumpur. Limitation this project, it will be only an Augmented Reality, not including Virtual Reality or Mixed Reality. Lack of Journal or Article about Heritage Street art in Malaysia. Researcher has limited time for project work. Because researchers only have a few months to complete the product.



CHAPTER V SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 CONCLUSION AND RECOMMENDATION

The conclusion that can be drawn from this project is that, improving the tourism experience for tourists can be done by using Marker-based Augmented Reality. By using Augmented Reality, users can understand and gained new knowledge about the importance of heritage street art. And also can help tourists to recognize heritage street art around the central market. The using of Instagram platform, it makes the user can easily to access and use it. This project has proven successful in achieving the goal of promoting heritage street art around the central market. Creating Augmented Reality is a long process and should also be completed in groups to save time, in order to achieve the best results. Further research is expected to create augmented reality with more building variations, and other features so that tourists are more interesting in exploring heritage street art.

Researchers utilized the feedback from the distributed survey to help them improve the experience when using augmented reality, especially for historical street art. Such as by creating it as 3D so that it can be seen both inside and outside of the heritage street art. Second, researchers must improve the marker to make it more sensitive so that it is scanned perfectly. Third, researchers receive input to add more locations. Fourthly, researchers can add information about the latest attractions around the Central Market, of Kuala Lumpur. And finally, the audience hopes that this augmented reality Instagram filter can be opened to the public soon.

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APPENDIX

Survey Question on Google Form

Enhancing Tourist's Experience in Tourism by Developing of Augmented Reality on Heritage Street Art

Hello, My name is Fadia Sekar Ismuning, I'm studying at Management and Science University majoring in Bachelor in Creative Multimedia. I am currently doing research with the title Enhancing Tourist's Experience In Tourism By Developing Of Augmented Reality On Heritage Street Art.

Therefore, kindly ask for your time and willingness to filling out this form honestly according to the current situation and conditions. The survey has 4 sections and will take about 5-10 minutes to complete. As the survey is anonymous, the answers provided will not be attributed to individual respondents. The data collected will also be kept confidential and only used for academic purposes. Your help is greatly appreciated. Please read the scale before answering.

Best Regards,
Fadia Sekar Ismuning
Student of Bachelor in Creative Multimedia (BCM)
Faculty of Information Science and Engineering
Management & Science University

Thank you!

SECTION A : Demographic

NO	Question	Answer
1.	Age	<ul style="list-style-type: none"> • 18-20 years • 21-29 years • 30-39 years • Above 40
2.	Occupation	<ul style="list-style-type: none"> • Government sector • Private sector • Self employee • Unemployee/student
3.	Residency (Kuala Lumpur, Selangor, Klang V, Jakarta, etc.)	Short answer

SECTION B : Yes or No

NO	Question	Answer
1.	Do you know where Pasar Seni located?	<ul style="list-style-type: none"> • Yes



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		<ul style="list-style-type: none"> • No
2.	Do you ever go to Pasar Seni, Kuala Lumpur?	<ul style="list-style-type: none"> • Yes • No
3.	Do you know that Pasar Seni has a Heritage Street Art?	<ul style="list-style-type: none"> • Yes • No
4.	Do you know that Pasar Seni has a beautiful Heritage Street Art to explore?	<ul style="list-style-type: none"> • Yes • No
5.	Do you agree Pasar Seni can be one of destination to go when you're in Kuala Lumpur?	<ul style="list-style-type: none"> • Yes • No

SECTION C : AGREE DISAGREE

NO	Question	Answer
1.	Do you agree of Heritage Street Art in interactive way?	<ul style="list-style-type: none"> • Strongly Disagree • Disagree • Neutral • Agree • Strongly agree
2.	Do you agree heritage street art interesting to explore with technology?	<ul style="list-style-type: none"> • Strongly Disagree • Disagree • Neutral • Agree • Strongly agree
3.	Do you agree that tourist's can enhance their experience at Heritage Street Art by using technology?	<ul style="list-style-type: none"> • Strongly Disagree • Disagree • Neutral • Agree • Strongly agree
4.	Do you agree that Pasar Seni is attractive for tourist's to explore Heritage Street Art ?	<ul style="list-style-type: none"> • Strongly Disagree • Disagree • Neutral • Agree • Strongly agree



SECTION D : OPEN QUESTION / OPEN SUGGESTION

1.	Is there any suggestion to enhance tourist's experience for exploring Pasar Seni efficiently?	Short answer
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Feedback survey question

NO	Question	Answer
1.	Email	Short answer
2.	How satisfied are you with my project overall?	<ul style="list-style-type: none"> • Very dissatisfied • Dissatisfied • Neutral • Satisfied • Very Satisfied
3.	How would you rate your overall experience with the augmented reality (AR) implementation on Heritage Steet Art at Central Market?	<ul style="list-style-type: none"> • Very dissatisfied • Dissatisfied • Neutral • Satisfied • Very Satisfied
4.	Did the AR experience enhance your understanding and knowledge of the heritage significance of Central Market?	<ul style="list-style-type: none"> • Not applicable (I didn't gain any new knowledge) • Applicable • Neutral • Significantly • Yes Significantly
5.	What do you like most about my project?	Short answer
6.	Are there any features or functionalities you would like to see added or improved?	Short answer
7.	Is there anything else you would like to share with me that could help me enhance your experience while using augmented reality especially on Heritage Street Art?	Long text answer

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