

THESIS

**CAMTOUR AR: A LOCATION-BASED AUGMENTED
REALITY MOBILE APPLICATION FOR
SEARCHING TOURIST ATTRACTIONS AND
CULINARY PLACES IN PHNOM PENH CITY,
CAMBODIA**



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DECLARATION

This is to clarify to the best of my knowledge that this thesis entitled “Camtour AR: A Location-Based Augmented Reality Application for Searching Tourist Attractions and Culinary Places in Phnom Penh City, Cambodia ” is the result of my own research work and it has not been previously submitted to any higher educational establishment in order to obtain any degree. All the views and opinions expressed therein remain the sole responsibility of mine and do not necessarily represent those of University of Atma Jaya Yogyakarta (UAJY), other researchers and organizations mentioned in this report.

Yogyakarta, November 2016



Sokthay Chanphearith

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ABSTRACT

Cambodia is located in Southeast Asia mainland and is a tropical, warm and humid country that is favorable for travelers all year around. It is one of the countries in Southeast Asia which filled with charming natural and historical tourism sites, culinary places, cultural and traditional attractions. Phnom Penh is the capital and largest city in Cambodia. Phnom Penh city is one of the interesting and alluring cities for tourist attractions and culinary places in Cambodia. Nowadays, most tourists have difficulty to search the tourist attractions or culinary places and also tourism information because that information are only retrieved from internet such as blog or website. This is not quick and flexible way to get the tourism places and information. The mobile technology begins evolving in today's daily life besides the basic task and it can be used for promoting the tourism in Cambodia.

The location based Augmented Reality technology can be used to give the location information by overlaying two-dimensional object on the mobile device. This research will utilize and implement the location based Augmented Reality combined with Wikitude SDK and Google maps service to present the information of tourist attractions and culinary places in Phnom Penh city. The developed application runs on Android platform powered mobile device which equipped with GPS and internet connection. The application can assist the user to search or find the existing tourist attractions and culinary places in Phnom Penh city quickly and easily.

Respondents involved in this research are 30 people. Black box testing is conducted to test all the available functions in the Camtour AR application. The questionnaire based testing method is conducted to measure the level of application usability. The usability testing covers the aspect of satisfaction, learnability, effectiveness and efficiency. According to the result of usability testing, it indicates that the satisfaction aspect achieves with 92.22%, learnability aspect achieved with 94.67%, effectiveness aspect achieved with 91.11% and efficiency aspect achieved with 88.89%. This shows that Camtour AR application is usable and ready to be utilized in the market.

Keywords: Phnom Penh city, Augmented Reality, Android, Usability

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