

AUGMENTED REALITY CAMPUS GUIDE
FOR CVSU - MAIN CAMPUS

THESIS

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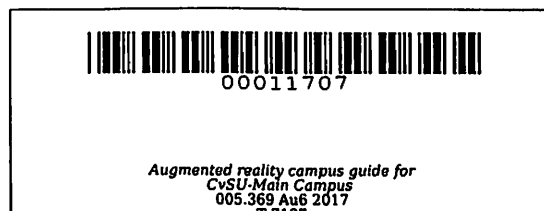
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AUGMENTED REALITY CAMPUS GUIDE FOR CVSU – MAIN CAMPUS

Undergraduate Thesis
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College of Engineering and Information Technology
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ABSTRACT

AURINO, CYRIL ELIJAH B. and PEREN, MARY KATHERINE M. Augmented Reality Campus Guide for CvSU Main - Campus Undergraduate Thesis. Bachelor of Science in Computer Science. Cavite State University, Indang, Cavite. May 2017. Adviser: Ms. Ria Clarisse L. Mojica.

This study conducted from August 2016 to April 2017 at Cavite State University - Main Campus. The purpose of the study was to help the people to be familiar around the CvSU Main Campus.

This study is an augmented reality (AR) Android-based application that is capable of showing university campus related information such as building names, faculty information, class rooms and courses offered, and building locations. AR is an overlaying digital information on top of the real worldview. AR, a potentially powerful technology, utilizes geolocation and visual imagery to provide a real-time data experience for users. It is a technology being rapidly developed and used for entertainment.

This application uses Android Studio for IDE, Vuforia SDK, Java for programming language, SQLite database for the mobile application, PHP, JavaScript, MySQL server database for the web service.

Extreme Programming Methodology was used as the methodology of the system. To implement the building detection, the Vuforia was used to extract the feature of building images to get the key points, and GPS to locate the building and Dijkstra's algorithm for navigation. One hundred random students from CvSU – Main campus and five faculty members of Department of Information Technology evaluated the system. There results were collected through a questionnaire based on ISO/IEC 9126.

According to the overall evaluation results, the system was judged to be excellent in all aspects such as functionality, reliability, usability, efficiency, maintainability, portability, and user-friendliness. Upon the completion of the study, the proponents concluded that this would be a solution for the common problems of the people that is not familiar around the Cavite State University - Main Campus.

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An undergraduate thesis submitted to the faculty of the Department of Information Technology. College of Engineering and Information Technology, Cavite State University, Indang, Cavite in partial fulfillment of the requirements for the degree Bachelor of Science in Computer Science with Contribution No. _____. Proposed under the supervision of Ms. Ria Clarisse L. Mojica.

INTRODUCTION

There are several map-based applications developed in the previous years for Cavite State University. Many of these applications are capable of showing different areas and routes around the campus. These softwares are meant to guide students to be familiar with the campus. However, it provides less interaction for user in getting information about a certain building.

Augmented reality (AR) is an overlaying digital information on top of the real worldview. AR is when the real-world blends with an interactive 3D environment using device camera or GPS data. AR, a potentially powerful technology, utilizes geolocation and visual imagery to provide a real-time data experience for users. It is a technology being rapidly developed and used for entertainment.

Augmented Reality Campus Guide for CvSU – Main Campus is an AR Android-based application that is capable of showing information of a particular department such as description of the buildings, class rooms, faculty members information, and courses