

**CVSU IMUS ANDROID MAPPING APP: ENHANCING CAMPUS ACCESSIBILITY
AND EFFICIENCY**

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ABSTRACT

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In today's rapidly advancing technological landscape, universities face the challenge of providing convenient and efficient services to their students, faculty, and staff. Campus accessibility is vital in ensuring a seamless and productive educational environment. This thesis presents the development and implementation of the CVSU Imus Android Mapping App, aimed at enhancing the accessibility and efficiency of the Cavite State University-Imus Campus (CVSU-Imus).

The primary objective of this study is to address the limitations of traditional campus navigation systems by leveraging the power of mobile technologies. The CVSU Imus Android Mapping App offers a comprehensive solution to streamline campus accessibility and improve the overall efficiency of daily operations within the university.

The research team employed various methodologies to achieve this goal, including user requirements analysis, system design, and software development. The app's features encompass a user-friendly interface. Using geolocation services enables users to locate buildings, facilities, and important landmarks within the campus.

Throughout the development process, the team conducted multiple usability tests and gathered user feedback to ensure that the app met their expectations and addressed their specific needs. The results demonstrated a significant improvement in

campus accessibility and efficiency, with users reporting reduced travel times, increased awareness of campus resources, and enhanced communication with university staff.

In conclusion, the CVSU Imus Android Mapping App offers a practical solution to enhance campus accessibility and efficiency at the CVSU-Imus Campus. By leveraging mobile technologies, this app provides users an intuitive and interactive platform to navigate the campus and optimize their daily activities. The successful implementation of this app demonstrates its potential to revolutionize the way universities approach campus accessibility and serve their academic community.

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INTRODUCTION

Technology has become a part of everyday life in the digital age. The primary means of communication and information sharing now are mobile smartphones. Mobile applications are now widely used for various tasks, including navigation, transportation, and education, as there are more and more smartphone users. Amid a pandemic, Cavite State University (CvSU) – Imus Campus is one of the universities that continued academic years through distance education. The university does acknowledge for excellently developing globally excellent and morally upright students. It is also known for its core values; truth, goodness, and service.

In the Philippines province of Cavite, Cavite State University-Imus (CvSU-Imus) is one of the top universities. It is difficult for students, professors, and visitors to navigate the campus as it increases with the university efficiently. Finding particular locations or departments gets more complicated when there are more buildings and facilities, especially for new students and visitors.

The researchers created an Android mapping application to improve campus efficiency

and accessibility to address this issue. Users of this app can access an interactive map of the CvSU-Imus campus that shows the locations of various structures, amenities, and workplaces. Users of this software will spend less time hunting for specific areas or departments and can move more swiftly throughout the campus.

Statement of the Problem

The main objective of this study is to develop an Android mapping application that enhances campus accessibility and efficiency. This research aims explicitly to respond to the following questions:

This research attempts to develop a 3D Navigation Map for Cavite State University – Imus Campus. More precisely, it aims to address the following questions:

One of the main challenges students and visitors face is the campus layout's complexity, which can be overwhelming and confusing. The app will provide a user-friendly navigation system that offers turn-by-turn directions, helping users find their desired locations efficiently. By integrating accurate mapping, users can easily explore the campus and locate buildings, classrooms, offices, and other vital facilities. *"How will the system help CvSU-Imus students and visitors navigate around the campus?"*

To accommodate users with limited internet connectivity, the application will support offline navigation, allowing users to access previously downloaded maps and directions without an active internet connection. *"How will the system enable offline navigation capabilities for users?"*

The app will incorporate an efficient route planning algorithm to calculate shortest and most convenient paths to the user's destination, taking into account factors such as building accessibility and pedestrian pathways. *"How will the system optimize route planning to ensure efficient navigation?"*

Objective of the Study