# DEVELOPMENT OF RHOSSE: ROBOTIC HOUSEHOLD ONLINE SECURITY SURVEILLANCE EQUIPMENT

THESIS

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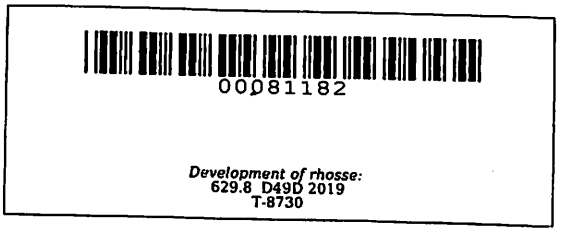
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# ABSTRACT

**AVILLA, EARL GERALD M., MALACAD, MELVIN A., MIRANDA, MARK RONIEL C. and TORRES, JOHN DAVID D. Development of RHOSSE: Robotic Household Online Security Surveillance Equipment.** Undergraduate Thesis. Bachelor of Science in Information Technology. Cavite State University, Indang, Cavite. June 2019. Adviser: Mr, Mark Philip M. Sy.

RHOSSE is an alternative for an expensive IP Cameras. It can capture photos, record videos and record sound. It has a mobile application that serves as the remote controller. It has two modes, the offline mode which uses local host address and online mode which uses a web server. The study was conducted from April 2018 and was completed on May 2019. The research and development of the study was made and conducted at Cavite State University - Main Campus with the same time period. The related literature of the study was compiled through the use of books and existing studies from the library.

The researchers used iterative model to show and describe the quality and functionality of the design. The iterative model is considered as appropriate since the process is cyclic of prototyping, testing, analyzing, and refining. The researchers created a plan about the components or hardware that might present in their study. They drew a blueprint of the structure of RHOSSE, they measured all the components to make a specific position to be placed inside the case. They installed an Operating System, Linux in the Raspberry PI, this is performed to point out the different codes using Python. They also developed a mobile application using Android Studio and assembled all the corresponding components to build RHOSSE. They researchers tested the mobile

application remote controller to RHOSSE and aims to be implemented in different houses. This will strengthen the security of households.

The researchers evaluated a total of 100 respondents, consists of 90 for non-technical respondents composed of IT students and parents or guardians, and 10 for technical respondents, composed of IT professionals in the department of Information Technology. The price of RHOSSE compared to IP cameras is less because RHOSSE costs only a total price of P8,600.00 without installation price, while the other IP cameras like QUBE WIRELESS NVR CCTV Kit 8Ch and 4Ch costs a total price of P33,999.00 with installation and P15,999.00 with installation and the complete hikvision 8 channel with 2MP indoor and outdoor CCTV costs P35,099.00 without installation. Which means the price of RHOSSE is less than the other IP cameras. The researchers highly suggest to upgrade the current power source and camera for a better performance.

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## INTRODUCTION

In today's era of modern technology. People are gradually learning to adapt technologies in different ways, so it is expected for a person to depend on technology to simplify everyday life. So why are we depending on technology? If there's no technology, the people may always be burden in works or get tired.

In security, technology is critical to enhancing security. Without cameras, detectors and alarms, businesses would be unable to identify threats and respond appropriately. For instance, setting specific algorithms for CCTV cameras such as signaling an alarm if an individual is hanging around a certain area for too long or being able to analyze and identify unusual or unexpected event will all help detect threatening incidents before they even happen.