

**UNIVERSITI TEKNOLOGI MARA**

**HOME INTELLIGENCE SURVEILLANCE SECURITY SYSTEM (HISSS)**

**SHAFIQ HAZRI SAMSULMASRI**

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(POWER)**

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## **ABSTRACT**

Video surveillance (CCTV) is used worldwide for security and monitoring, but debates exist regarding the balance between surveillance and privacy rights, while home security systems lack advanced technologies, making homeowners susceptible to security breaches and property damage. The goal is to create a smart home security system using an ESP32 CAM AI Thinker MB Programmer, encompassing circuit design and system construction. This report aims to design a wireless CCTV system using an ESP32 CAM AI Thinker MB Programmer. This project utilizes three inputs which are a human movement detector, a collision impact sensor, and a high sensitivity sound detector and has three corresponding outputs which are capturing and recording motion, a buzzer, and an LED. The system initiates sensor detection, stops if nothing is detected, otherwise starts recording and saves it to storage, with optional activation of the buzzer and green LED for 1 minute. The significance of this study lies in its contribution to the future development and improvement of surveillance technology, paving the way for advanced security measures and optimized resource utilization, such as the production of CCTV materials from recyclable or environmentally friendly materials.

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# **CHAPTER 1**

## **INTRODUCTION**

This section will delve into the project's commencement, aiming to understand its purpose, potential contributions, and achievable outcomes through defined objectives. Additionally, it will elaborate on the scope of work required for the project's realization.

### **1.1 Introduction**

CCTV originated in the 1940s for military and industrial use, with the first system capable of recording on magnetic tape developed by Walter Bruch in 1942. Since then, advancements like digital video recording and network-based systems have greatly enhanced CCTV functionality. However, current home security systems lack integration of advanced technologies such as human movement detectors, collision impact sensors, and high sensitivity sound detectors, which are crucial for comprehensive surveillance and protection. Traditional security systems rely on basic motion sensors or alarms, which can lead to false alarms or fail to detect specific threats, leaving homeowners exposed to security breaches, property damage, and safety risks.

By integrating human movement detectors, collision impact sensors, and high sensitivity sound detectors, an improvised CCTV system can be enhanced. These