

# Anti-Theft Door Mat System for Home Security using IoT

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**Abstract:** *The increasing prevalence of burglaries and unauthorized entries into homes has heightened the need for efficient security solutions. In the era of smart homes and automation, IoT (Internet of Things) technology offers advanced capabilities for monitoring and protecting homes in real-time. The development of IoT-based anti-theft systems aims to provide more intelligent, automated, and responsive security measures. This system introduces a novel approach to home security by integrating a smart doormat with a face recognition system, Arduino-based controls, and communication tools such as a GSM module. The system alerts family members when suspicious or unknown individuals attempt to access the home, offering a proactive approach to security management. The core of this anti-theft system lies in the smart doormat embedded with pressure sensors. When a person steps on the mat, the pressure sensor detects the presence and triggers the face recognition system to identify the individual. The Anti-Theft Flooring System (ATFS) is Internet of Things (IoT) solution developed for enhancing residential safety and security. In order to ensure the security and safety of our home while we are away, we propose the use of Raspberry Pi to implement an IOT-based burglar detection and alert system. IoT involves the improvement of networks to efficiently acquire and inspect statistics from different sensors and actuators, then send the statistics via Wi-Fi connection to a personal smartphone or laptop.*

**Keywords:** IoT, Security, home automation