ROOM HOUSE DETECTION APPLICATION USING THE YOU ONLY LOOK ONCE (YOLO) ALGORITHM

RANDY PRIMA SETYAWAN
*Informatics Study Program, Faculty of Science &
Technology*
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail : randyprimas@gmail.com

ABSTRACT

Kost Pandita, a property business that focuses on room rental, is located in Yogyakarta. Currently, Kost Pandita's security system is monitored by guards 24 hours a day. However, this system still has weaknesses, such as breaking the rules in the form of bringing strangers into residents' rooms and theft when guards are careless. To overcome this problem, a system is needed that can detect the presence of foreigners who are not residents of Kost Pandita. The aim of this research is to develop an occupant detection system using YOLO (You Only Look Once) technology which can improve security at the Pandita Boarding House by recognizing and distinguishing occupants from strangers via Closed Circuit Television (CCTV). This project uses the YOLO (You Only Look Once) method which is integrated into a Closed Circuit Television (CCTV) system. The data used in this system is in the form of 10 photo images from 3 Closed Circuit Television (CCTV) video recordings taken during the day and night. YOLO (You Only Look Once) was chosen because of its ability to detect objects quickly and accurately. The prototype of the Pandita Boarding House occupant detection system that has been developed shows promising results with an average occupant detection accuracy of 69% or 0.690909. To increase the effectiveness of the Pandita Boarding House occupant detection system, several development steps will be taken in the form of the train Network feature in the Pandita Boarding House occupant detection system.

Keywords: Pandita boarding house; Detection System; CCTV Security; YOLO