ABSTRACT

The Telkom University Landmark Tower (TULT) building is one of the lecture buildings at Telkom University, CCTV has been installed in each classroom to monitor the room 24 hours a day. Based on observations in the use of electronic facilities, users accidentally left the room with the lights, TV and AC still on. This could result in losses for Telkom University because they have to pay more costs for using electrical energy.

Therefore, in this research, we explain the implementation of an Intelligent Monitoring System (IMS) *which is used to monitor and control classroom conditions remotely. The tool used to monitor the classroom is CCTV, while the control tool uses an IoT device, and uses a website to find out the condition of the classroom remotely. The author uses a switch that can be connected to the internet as an IoT device to control the lights, TV and AC available in the classroom. In this context, the author uses a branch of deep learning with the YOLOv8 method and a confidence level value of 0.1 to detect human presence in the classroom. The results of this test show that using the YOLOv8 method and a confidence level value of 0.1 in detecting humans in the classroom obtained an accuracy rate of 100%, sensitivity of 100% and specificity of 100%. So the YOLOv8 method and a confidence level value of 0.1 are used in this research.*

Based on the research results, it is revealed that the majority of users rated the feature options on the mobile website as very friendly (64.3%) and friendly (28.6%) with a score of 4-5 (on a scale of 5), this indicates a high level of satisfaction with the effectiveness and usability of these features. Meanwhile, a small portion (7.1%) found the available features on the mobile website to be sufficiently friendly This study involved 14 participants, including security guards, employees, and students from Telkom University. A brief conclusion from the implementation of IMS shows that the system successfully meets technical requirements and user expectations as an effective tool for problem-solving.

Keywords : Classrooms, Electronic Facilities, IMS, Website