

## **ABSTRACT**

Occupancy detection in this final project is intended to detect the presence of people in the classroom that will be used to control the intensity of light and temperature in the room. This Final Project discusses the development of occupancy detection systems, specifically the detection of human presence in classrooms using computer vision. Deep learning is used to predict human presence from image data or video. The data obtained will be processed, then the output will be forwarded to the controller to control fans, lights, and curtains in the classroom.

The development of occupancy detection systems aims to improve the efficiency of energy use in classrooms by controlling electronic equipment in the classroom based on the results of occupancy detection. From this study, the average accuracy in detecting people was 83.45%.

***Keyword*** : *Computer Vision, Deep Learning, IoT, Machine Learning, Occupancy*