

ABSTRACT

Public transportation offers safe and efficient transportation, but passenger safety challenges remain, particularly in detecting behaviors such as standing, falling, and sitting. This research designs a real-time video surveillance system based on 3D Convolutional Neural Network (3D CNN) to detect these behaviors. The system utilizes cameras capable of effectively monitoring passenger behavior. The research methodology includes designing 3D CNN architecture, dataset collection, training, and evaluation using accuracy metrics and confusion matrix. The expected results from this research are a system that can automatically detect passenger behavior with high accuracy, which can improve safety and comfort in public transportation. Furthermore, this research is expected to provide benefits to the transportation industry and serve as a reference in selecting surveillance technology.

Keywords: 3D CNN, passenger behavior detection, cameras, passenger safety, public transportation, video surveillance.