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Social Distance Detecting using Deep Learning for Present and Future Viral Outbreaks

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Abstract: *This report outlines a deep learning-based method for monitoring social distancing by analyzing the spacing between individuals in shared environments. The aim is to reduce the spread of infectious viruses like, HMPV, and other potential future threats. The system uses video input, applying the YOLOv3 model—a pre-trained neural network—to detect pedestrians. To measure distances between people accurately, the footage is converted into a top-down, two-dimensional perspective. Individuals who don't maintain the required safe distance are flagged with red boxes and connecting lines. The model was tested with pre-recorded pedestrian footage and showed strong performance in identifying distancing violations. This approach can be effectively used in hospitals and other public settings to help control disease transmission..*

Keywords: social distancing

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