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Optimized Face Mask Recognition with Edge Deployment Framework in Guard Bot using Deep Learning

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Abstract: *The most recent outbreak to prompt an international health emergency is coronavirus illness. It primarily spreads via airborne transmission from person to person. The number of cases worldwide has increased as a result of community transmission. Several machine learning-based techniques have been used in the health field. Lack of data is one problem preventing machine learning techniques from discovering COVID-19 cases. A Mask-RCNN that can accurately identify face masks can alert users to wear one. To do this, Mask-RCCN employs two cutting-edge techniques. First, we present a unique residual context attention module (RCAM) to extract rich context data, focus on key face mask related regions, and detect mask region from the face using RPN. To develop more distinguishing traits for faces with and without masks, second. This method can distinguish between masked and uncovered faces, making it easier to utilize face masks and keeping an eye out for safety violations.*

Keywords: CNN, DL, Image Processing, MR-CNN, RNN

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