

# Real Time Face Mask Detection with Automatic Door Control System Using ESP-32 CAM Module and Arduino Uno

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**Abstract:** *The COVID-19 pandemic has led to the widespread use of face masks as a preventive measure to curb the spread of the virus. In this paper, we propose a real-time face mask detection system using the ESP-32 cam module and Arduino Uno. The system utilizes a code to analyze captured images and detect whether a person is wearing a face mask or not. The ESP-32 cam module captures images in real-time, while the Arduino Uno processes the data and provides a real-time alert if a person is detected without a mask and conversely, if the Arduino detects a person wearing a mask, it will trigger the motor to open the barricade. Our findings demonstrate the high accuracy of the proposed system in detecting face masks, making it suitable for use in public spaces like malls, universities, and offices to encourage individuals to wear masks as a preventive measure against the COVID-19 virus. We can deploy the proposed system in a wide range of applications due to its cost-effectiveness and ease of use*

**Keywords:** face mask detection, ESP 32 CAM, Arduino