A Major Project

On

FACE MASK DETECTION USING CNN

(Submitted in partial fulfillment of the requirements for the award of Degree)

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE AND ENGINEERING

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CERTIFICATE

This is to certify that the project entitled "**FACE MASK DETECTION USING CNN**" is being submitted by **A. SHASHI SAI KIRAN (19E41A05F5), M. VISHAL (19E41A05H4), B. SUMANTH (19E41A05J2), CH. PAVAN KALYAN (19E41A05H2) in partial fulfillment of the requirements for the award of the degree of B. Tech in Computer Science and Engineering to the Sree Dattha Institute Of Engineering And Science, is a record of bonafide work carried out by him/her under our guidance and supervision during the year 2022-23.**

The results embodied in this thesis have not been submitted to any other University or Institute for the award of any degree or diploma.

Mrs. Deepthi
(Guide)

Dr. P. Srinivasa Rao
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Submitted for viva voice Examination held on

ACKNOWLEDGEMENT

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ABSTRACT

COVID-19 pandemic has rapidly affected our day-to-day life disrupting the world trade and movements. Wearing a protective face mask has become a new normal. In the near future, many public service providers will ask the customers to wear masks correctly to avail of their services. Therefore, face mask detection has become a crucial task to help global society. This paper presents a simplified approach to achieve this purpose using some basic Machine Learning packages like Tensor Flow, Keras, Open CV and Scikit-Learn. The proposed method detects the face from the image correctly and then identifies if it has a mask on it or not. As a surveillance task performer, it can also detect a face along with a mask in motion. The method attains accuracy up to 95.77% and 94.58% respectively on two different datasets. We explore optimized values of parameters using the Sequential Convolution Neural Network model to detect the presence of masks correctly without causing over-fitting.

LIST OF FIGURES