



# REAL-TIME FACE MASK DETECTION WITH ALERT SYSTEM

Mr. Milroy Rodrigues
Mr. Patrick Ribeiro
Mr. Naushad Chowdhari

# Certificate


This is to certify that

The project entitled

# Real-time face mask detection with alert system

Is a record work done
by
Mr. Milroy Rodrigues

Mr. Patrick Ribeiro

Mr. Naushad Chowdhari

Of M.Sc. Part II (Electronics) 2020-2021

The candidates themselves have worked on the project during the period of study under my guidance and to the best of my knowledge it has not previously formed the basis of award of any previous degree or diploma at Goa University or elsewhere.

| | | |
|---|---|---|
| H.O.D (Electronics) | Examiner | Project Guide |

# Real-time face mask detection with alert system

Master thesis performed in Electronics

By

Mr. Milroy Rodrigues

Mr. Patrick Ribeiro

Mr. Naushad Chowdhari

Goa University 2020-2021

# Acknowledgements

In successfully completing this project, many people have helped me. I would like to thank all those who are related to this project.

Primarily, I would thank God for being able to complete this project with success. Then I will thank my H.O. D Dr. Jivan Parab, who gave me the golden opportunity to do this project. It helped me in doing a lot of Research and i came to know about a lot of things related to this topic.
Finally, I would like to thank my parents and friends who have helped me with their valuable suggestions and guidance and have been very helpful in various stages of project completion.
Also, thanks to all the guys that share their knowledge freely on the internet.

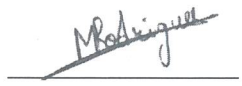
And thanks to all those who we might have forgotten to thank.

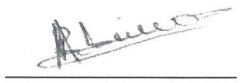
# TABLE OF CONTENTS

# Declaration

We solemnly declare that this project has been composed by us and to the best of our knowledge has not formed the basis for the award of any diploma or degree.

M.Sc. (ELECTRONICS)
2020-2021

Mr. Milroy Rodrigues 

Mr. Patrick Ribeiro 

Mr. Naushad Chowdhari 

# Abstract

The corona virus COVID-19 pandemic is causing a global health crisis so the effective protection methods is wearing a face mask in public areas according to the World Health Organization (WHO). The COVID-19 pandemic forced governments across the world to impose lockdowns to prevent virus transmissions. Reports indicate that wearing face masks while at work clearly reduces the risk of transmission. An efficient and economic approach of using AI to create a safe environment in a manufacturing setup. A hybrid model using deep and classical machine learning for face mask detection will be presented. A face mask detection dataset consists of with mask and without mask images, we are going to use OpenCV to do real-time face detection from a live stream via our picam. We will use the dataset to build a COVID-19 face mask detector with computer vision using Python, OpenCV, and Tensor Flow and Keras. Our goal is to identify whether the person on image/video stream is wearing a face mask or not with the help of computer vision and deep learning.