115_Smart Gateway Screening for Covid-19

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Abstract:
Novel Corona-virus is spreading all over the world. Millions of people have been infected with this disease and unfortunately thousands have lost their lives. Countless others have experienced the impact of Covid-19 on their health as well as in their day-to-day life. For the past one and half year as of May - 2021, the world balance and the economics have changed. Entire workflow has been shifted online, with people continuing to face a lot of difficulties due to this sudden change. But there will be a moment when normalcy will be restored, businesses bereopened and all the offices as well as other institutions start functioning as normal. This will be the most vulnerable moment as people will come in contact with each other and hence there will be a danger of this disease spreading in mass again. Hence, a system needs to be adopted to curb its spread and this can be achieved by identifying people showing the symptoms and thereby preventing them from entering organizations with a lot of attendees. The proposed system implements mask and temperature detection, sanitation while also providing a touch-less Attendance Management system for taking the attendance.

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***Abstract*— Novel Corona-virus is spreading all over the world. Millions of people have been infected with this disease and unfortunately thousands have lost their lives. Countless others have experienced the impact of Covid-19 on their health as well as in their day-to-day life. For the past one and half year as of May - 2021, the world balance and the economics have changed. Entire workflow has been shifted online, with people continuing to face a lot of difficulties due to this sudden change. But there will be a moment when normalcy will be restored, businesses bereopened and all the offices as well as other institutions start functioning as normal. This will be the most vulnerable momentas people will come in contact with each other and hence there will be a danger of this disease spreading in mass again. Hence, a system needs to be adopted to curb its spread and this can be achieved by identifying people showing the symptoms and thereby preventing them from entering organizations with a lot of attendees. The proposed system implements mask and temperature detection, sanitation while also providing a touch- less Attendance Management system for taking the attendance.**

Keywords — Coronavirus, Sanitization, Mask detection, Machine learning.

I. INTRODUCTION

The fall of 2019 was overshadowed by the spread of Covid-19. What started as just another disease in Wuhan, China; quickly spread throughout the planet. In mere months, the effects were seen in all parts over the world. This system therefore implements Face Mask Detection to identify people not wearing masks as well as people not wearing it properly. Also, it includes Temperature Detection to check the Body Temperature of an individual which is within the limits of a person having fever. Further, it also provides sanitizer for Sanitization purpose which is automatic and is contactless in nature. The system also implements a touchless QR Code Based automatic Attendance Monitoring System attendance.

A. Issues in current implemented system

With vaccination drives on full swing and strict rules implanted by the government, recovery was soon a possible dream. However, studies have revealed that a slack in following the rules and regulations will be responsible for new waves of Covid-19 in different and dangerous variants.Hence, it will be very important to abide by the rules and implement systems that can detect the spread of this virus and automate the system of detecting mask, recording temperature, sanitization and managing attendance.

B. Need of Smart gateway Screening

A system needs to be adopted to curb the spread of this disease and this can be achieved by identifying people showing the symptoms and thereby preventing them from entering places with a lot of attendees. This can be done by providing face mask detection facility. Another important feature of this system is to detect body temperature of an individual while providing sanitization facilities, as well as a touchless attendance management system.

II. Literature Review

Smart Gateway Screening is a system to screen attendees in mass to identify people showing symptoms of Covid-19, provide sanitization facilities as well as automate system which were previously operated by a person.

Most of the studies shown focus on implementing only one part of the system which though important cannot provide entire protection to huge institutions where installed. Also, the accuracy of the system has been improved for example; face mask detection system can identify people not wearing face mask properly with precision. The below surveys are found on the studies that are already completed and the proposed project aim to provide a superior solution.