CONTACT LESS HAND SIGN BASED ELEVATOR CONTROL USING MACHINE LEARNING

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Abstract:
Today's all over the world, corona disease is widespread in all countries. Everyone has taken care from corona disease, the problem is that existing elevators are touch based to up and down and corona spreads widely in these environments , time has become a precious resource. Therefore, different strategies and techniques are constantly being employed in all fields of life to save every bit of time. So we design contactless elevators using hand sign detection. In this project, we used Machine Learning Methodology to design new Technology. In these system users can show the hand in front of camera, system detects the user's hand and recognition of particular hand sign, once process done then CNN algorithm classify the sign to control the elevator.
Keywords: Hand Sign Detection, Elevator, Machine Learning, CNN, Image Processing, Article History .

I.INTRODUCTION

The implemented system is a touch less interface to manage the control display inside an elevator. The only input of the interface is the movement of the user's hand to select the desired floor. Thus, the control of the elevator is based on gesture recognition. In such an environment, the interface needs to be compliant with the following requirements:
Users with no distinction of age, education level, habits, and experiences need to be able to control the elevator without a specific and deep training; The selection of the floor has to be based only on the user's hand movements, without any physical interface such as a button. Even buttons to turn on the recognition are excluded since the entire interaction has to be touchless; As in ordinary elevators, users can select more floors, and the number of false positives should be null.

Motivation

No need to touch the button. Contact less elevator system Design user friendly environment for control of the elevator. Minimize the Covid 19 Like Pandemics.

Problem Definition

Challenges in this project to implement the contact less or touch less elevator. Existing system also works properly without any problems. Therefore, our aim is to design a user-friendly environment.

I. PROPOSED SYSTEM

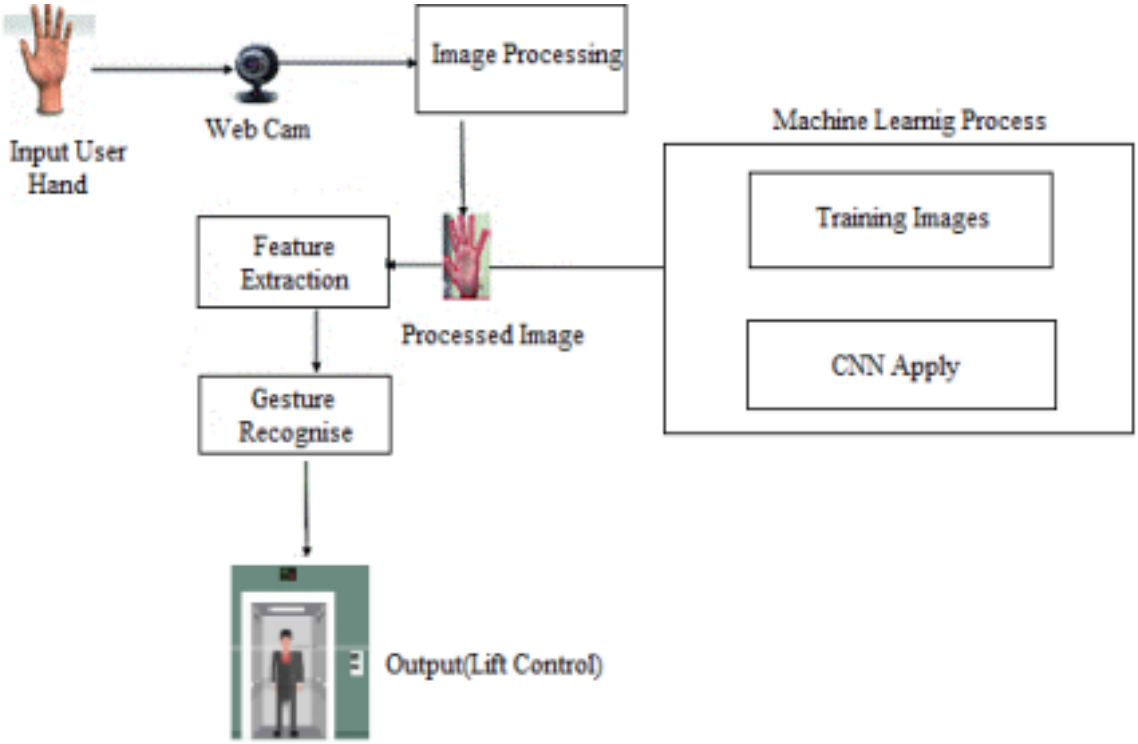


Figure 1: System Architecture

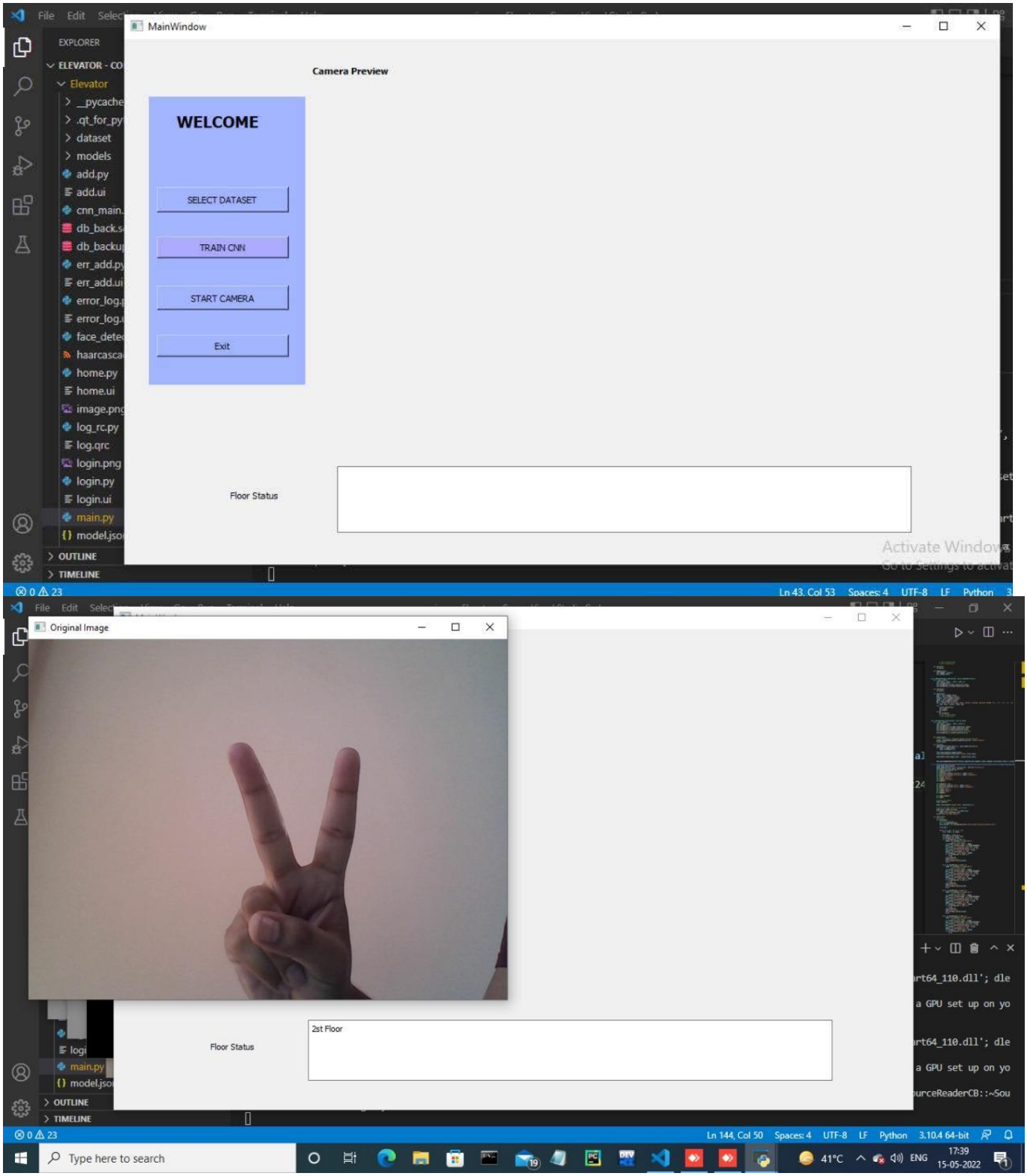
a. System Architecture:

Todays all world the corona disease are widely sprayed all country everyone has taken care from corona disease, the problem is that existing elevator are touch based to up and down and corona sprayed widely in these environment also so modern day world, time has become a precious resource. Therefore, different strategies and techniques are constantly being employed in all fields of life to save every bit of time. So we designed contactless elevator using the handsign detection. In this project, we used Machine Learning Methodology to design new Technology. In these system user can show the hand in front of camera, system detect the user hand and recognition of particular handsing, once process done then CNN algorithm classify the sign to control the elevator

Software Requirements Specification

A software requirements specification (SRS) is a document that is created when a detailed description of all aspects of the software to be built must be specified before the project is to commence. It is important to note that a formal SRS is not always written. In fact, there are many instances in which effort expended on a SRS might be better spent in other software engineering activities.

III.Output:


MainWindow
Camera Preview
WELCOME
SELECT DATASET
TRAIN CNN
START CAMERA
Exit
Floor Status
Original Image
2st Floor
Floor Status
Type here to search

IV. CONCLUSION

The purpose of the project is to enhance the recognition capability for various lightning conditions and achieve more accuracy. Implementing and identifying the number of gestures. This system is a contactless elevator using the hand sign based control.

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