IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 2, May 2022
Impact Factor: 6.252

Smart Door with Biometric Face Recognition and Thermal Screening

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Abstract: *Since the outbreak of covid-19 it has become truly challenging to recognize the individuals who visit us at our home, offices, educational instituitions are influenced by the infection or not during this COVID19 pandemic. To tackle this issue as of now, temperature gadgets are regularly used. But these gadgets are not non-contact. With the development of artificial intelligence and computer vision, face recognition has become a hot topic of pattern recognition. While recognizing any individual, the most important attribute is face. It serves as an individual identity of everyone and therefore face recognition helps in authenticating any person's identity using his personal characteristics. The whole procedure for authenticating any face data is sub-divided into two phases, in the first phase, the face detection is done quickly except for those cases in which the object is placed quite far, followed by this the second phase is initiated in which the face is recognized as an individual. Then the whole process is repeated thereby helping in developing a face recognition model which is considered to be one of the most extremely deliberated biometric technology. Our projects presents a conceptual model for providing entry access to an individual after face recognition and thermal screening. We will interface an IR temperature sensor to detect the temperature of an individual along with face detection to grant entry access. The proposed conceptual model can be helpful at every individual house, hospital to detect the temperature of the in-pateint and at institutions.*

Keywords: COVID, Arduino UNO, Temperature sensor, LCD Display, DC Motor.

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