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BONAFIDE CERTIFICATE

Certified that this project report **"AUTOMATED STUDENT ATTENDANCE MONITORING SYSTEM USING MULTIPLE FACE DETECTION AND RECOGNITION-AI"** is the bonafide work of **"VARUNPANDI.R (922117104056), VASANTHA KUMAR.S (922117104057), YASHWANTH BALAN.A (922117104062)"** who carried out the project work under my supervision.

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ABSTRACT

Personal identification is considered an important aspect in recognizing the identity of a particular individual. A person's identity can be validated through the traditional or biometric methods. The application of biometric recognition in personal authentication enables the growth of this technology to be employed in various domains. The implementation of biometric recognition systems can be based on physical or behavioral characteristics, such as the iris, voice, fingerprint, and face. Currently, the attendance tracking system based on biometric recognition for education sectors is still underutilized, thus providing a good opportunity to carry out interesting research in this area. Yet, these types of methods are proved to be time consuming and tedious, and sometimes, fraud occurs. In the human body, face is considered to be the distinctive part that identifies a person. Face recognition system can be built by making use of facial features and techniques could. Taking or marking attendance is an important task in any organization. In educational institutions like college or schools, the teachers used to call out student's name and used to mark their presence or absence in an attendance register. However, these traditional techniques of marking attendance are considered to be time taking and annoying. A better system which makes use of artificial intelligence can address this. The planned model makes use of a camera which supposed to take a photo as an input file, an algorithm for identification of face, then encoding and detecting the face captured in the image, marking the attendance in a excel sheet. Then the resultant images are stored in the database against an identifier. The features of the face can be extracted using Local Binary Pattern Histogram algorithm. The parameters radius, neighbors, grids, gridy are considered. The algorithm trains the images and performs LBP operation and concluded with recognition of face. Student details are registered and stored in database as in the form of feature values for security purpose. At the time of attendance tracking, admin verifies the student with unique Face biometrics. Face recognition can be done with the help of deep learning algorithm. It can be useful to avoid fake attendance and improve automated system in real time college environments. Experimental results shows that the real time interface with student details and will implement software framework.

LIST OF FIGURES

LIST OF ABBREVIATIONS

S.NO	ABBREVIATION	EXPANSION
1	**CNN**	Convolutional Neural Networks
2	**AI**	Artificial Intelligence
3	**DL**	Deep Learning
4	**SVM**	Support Vector Machine
5	**HAAR**	High Altitude Acute Response Miscellaneous