

# **Smart Attendance**

Project report submitted in partial fulfillment  
of the requirements for the degree of

*Bachelor of Technology*  
*in*  
*Computer Science Engineering*

by

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**CERTIFICATE**

This is to certify that the project entitled “Title of the project” , submitted by Student 1 (Roll no 1), Student 2 (Roll no 2) and Student 3 (Roll no 3) in partial fulfillment of the requirement of degree in Bachelor of Technology (B. Tech), is a bonafide record of work carried out by them at the Department of Electronics and Communication Engineering, The LNM Institute of Information Technology, Jaipur, (Rajasthan) India, during the academic session 2016-2017 under my supervision and guidance and the same has not been submitted elsewhere for award of any other degree. In my/our opinion, this report is of standard required for the award of the degree of Bachelor of Technology (B. Tech).

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Date

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Adviser: Name of BTP Supervisor

# Acknowledgments

Write your text here, to acknowledge the people who have helped you completion of this project.

# Abstract

This project aims to develop a smart attendance system that uses machine learning techniques to automate the process of taking attendance. The system will be designed to recognize and identify individuals using facial recognition technology, and will use machine learning algorithms to analyze and process the data. The system will be customizable and adaptable, allowing for integration with existing attendance management systems. In addition, it will provide real-time attendance reports and notifications to help improve efficiency and decision-making. By leveraging machine learning, the proposed system will increase accuracy and reliability of attendance records, while also reducing the time and resources required for manual attendance management. The project has the potential to significantly improve attendance management in various settings, including schools, colleges, and workplaces.

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# **Chapter 1**

## **Introduction**

### **1.1 The Area of Work**

This project primarily focuses on face recognition and detection using various algorithms, with a particular emphasis on utilizing different labeling techniques to map students to their assigned seats.

### **1.2 Problem Addressed**

The face detection attendance system aims to address the problems associated with traditional attendance systems that rely on manual processes. One of the primary issues with manual attendance systems is that they are time-consuming and prone to errors, which can lead to inaccurate attendance records. Additionally, manual attendance systems are vulnerable to fraudulent practices such as proxy attendance, where someone else marks the attendance on behalf of an absent student or employee. These problems can result in loss of productivity and can hinder decision-making processes that depend on accurate attendance data.

The face detection attendance system solves these problems by automating the attendance process using facial recognition and facial detection technology. It accurately identifies and records the attendance of individuals without requiring any manual intervention, thus reducing the time and resources required for attendance management. The system also eliminates the possibility of proxy attendance, as it requires the physical presence of the individual for attendance to be marked. Overall, the face detection attendance system provides a reliable and efficient solution to attendance management problems.

## **1.3 Existing System**

### **1.3.1 Physical Signing**

The traditional system of taking attendance in college lectures involves a manual process where students sign their names on a paper or a register to indicate their presence. However, with the advent of technology, attendance management systems have evolved to become more efficient and reliable.

### **1.3.2 RFID**

A more recent system is the RFID (Radio Frequency Identification) attendance system, where students are provided with RFID tags that are detected by sensors installed in the lecture room. The system identifies the individual tags and records the attendance automatically.

## **1.4 Creation of bibliography**

Use bibch1.bib file to save your bib format citations. Use the command [1] for referring to a particular article [2].

## Chapter 2

# Literature Review

### 2.1 Introduction

Chapter 2 goes here ...

Sample image insertion.



FIGURE 2.1: LNMIIT Logo

Sample table

Transitions( $\triangle_{k-1}, \triangle_k, \triangle_{k+1}$ )	Delay of Line ' $k$ '	Crosstalk class $C_c$
$\uparrow - \uparrow, \downarrow - \downarrow, \uparrow - \downarrow, \downarrow - \uparrow, \uparrow - -$ $, \downarrow - -, - - -, - - \uparrow, - - \downarrow$	0	1
$\uparrow\uparrow\uparrow, \downarrow\downarrow\downarrow$	1	2
$\uparrow\uparrow -, \downarrow\downarrow -, - \uparrow\uparrow, - \downarrow\downarrow$	$1+\lambda$	3
$- \uparrow -, - \downarrow -, \uparrow\downarrow\downarrow, \uparrow\uparrow\downarrow, \downarrow\downarrow\uparrow, \downarrow\uparrow\uparrow$	$1+2\lambda$	4
$- \uparrow\downarrow, - \downarrow\uparrow, \downarrow\uparrow -, \uparrow\downarrow -$	$1+3\lambda$	5
$\uparrow\downarrow\uparrow, \downarrow\uparrow\downarrow$	$1+4\lambda$	6

TABLE 2.1: Delay and Crosstalk Classes for various 3-bit combinations (transitions)

## **Chapter 3**

# **Proposed Work**

## **Chapter 4**

# **Simulation and Results**

## **Chapter 5**

# **Conclusions and Future Work**

# Bibliography

- [1] S. Saini, A. M. Kumar, S. Veeramachaneni, and M. Srinivas, “An alternative approach to buffer insertion for delay and power reduction in vlsi interconnects,” in *VLSID'10. 23rd International Conference on VLSI Design, 2010.*, pp. 411–416, IEEE, 2010.
- [2] A. Imre, G. Csaba, L. Ji, A. Orlov, G. Bernstein, and W. Porod, “Majority logic gate for magnetic quantum-dot cellular automata,” *Science*, vol. 311, no. 5758, pp. 205–208, 2006.