**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

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**DBMS MINI PROJECT (21CSL55) SYNOPSIS ON**

“Facial Based Attendance Management System”

Submitted in partial fulfillment of the requirements for the award of degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE & ENGINEERING

*For the academic year*

*2023-2024*

**Submitted By:**

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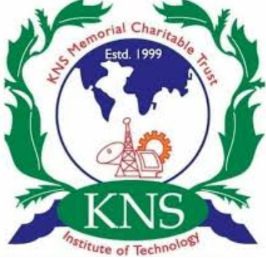
*Under guidance of*

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|  | **Project Title:** Facial Based Attendance Management System. |
|  | **Name** **of** **the** **Guide:** Prof. Mohammed Ziaulla |
|  | **Abstract:** This Flask application integrates face recognition for attendance management. Utilizing the face\_recognition and cv2 libraries, it identifies individuals from a video feed, marking attendance in a MySQL database. The system stores known face encodings and correlates them with live video to recognize and record attendees. Additionally, it features functionality for adding new user data, including face images, into the database, ensuring the system remains up-to-date. The application's backend structure supports dynamic attendance tracking, leveraging SQL queries for data manipulation and retrieval, offering a modern approach to managing attendance through facial recognition technology. |
|  | **Objectives of the Project:** The objective of this project is to develop an automated attendance management system that leverages facial recognition technology to identify and record the attendance of individuals. This system aims to streamline the attendance tracking process, reduce manual intervention, eliminate errors associated with traditional attendance methods, and provide a secure and efficient way of handling attendance data. By integrating advanced image processing and database management techniques, the project seeks to offer a reliable, accurate, and user-friendly solution for educational institutions, corporate environments, and other organizations requiring regular attendance monitoring. |
|  | **Existing Methods:** Existing methods for tracking attendance primarily fall into several categories, each with its own set of advantages and disadvantages. These methods have been widely used in various settings, including educational institutions, workplaces, and events. Here's a brief overview:   * Manual attendance * Card systems * Biometric systems * Pin Codes or Passwords * Mobile Application |
|  | **Proposed Methods:** The proposed method for tracking attendance in this project is an advanced facial recognition system integrated with AI-driven analytics. This system aims to overcome the limitations of existing methods by providing a seamless, secure, and efficient way to record attendance without requiring physical contact or manual intervention. Here's an overview of the proposed method:   * Automated attendance recording * Real-time processing * High accuracy and security * Reduced potential for fraud * Contactless and hygienic |

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|  | **Hardware Requirements:**  **Processor:** Dual-core or higher processor (e.g., Intel Core i3 or equivalent).  **RAM:** Minimum 8GB RAM to ensure smooth operation of the databasemanagement system and web server**.**  **Webcam:** 720 mega pixels or more.  **Storage:** 10gb or more. |
|  | **Software Requirements:**  Operating system : Windows 7,10 ,11  Language : Python 3.6 and more, HTML, CSS.  Browser : Any of Web browser like, Mozilla, Chrome, etc.  Server : Flask.  Database : MySQL Community Server (GPL)  Back-end : MySQL connection Front-end : HTML, Python. |
|  | **References:**  [**https://www.w3schools.com/**](https://www.w3schools.com/)  [**https://pypi.org/project/**](https://pypi.org/project/)  [**https://www.python.org/**](https://www.python.org/)  [**https://youtube.com**](https://youtube.com) |

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