

**Human resource Management System Based on Face Recognition system**Shraddha Khobragade¹, Chitra kohale², Bharti Fule³

Guided by: Prof Uma Thakur

*Priyadarshini Institute Of Engineering and Technology

** Computer Science & Engineering

Abstract- In Human resource management system various phases of persons details are covered up where HR department can update, delete, modify employee details from database and manage employee payment details, work allocation details of share details, recruitments information, short listed candidate project allocation, experience, education details, employee attendance and according to attendance automatically generate the salary. HRMS use to reduce the maintenance of employee details. An HRMS system for automatic facial expression recognition has implemented in HRMS system automatic facial expression like nose, eyes recognition process is used. An HRMS interact with the user for automatic face recognition and recognize facial features. In human resource and management system, each single detail of the user is updated by themselves, automatically when the user login into the system..

Keywords: Face recognition, feature extraction, automatic attendance, payroll system, personal detail management, data security, character comparison, leave management

I. INTRODUCTION

In today's networked world we need to keep the security of information or physical possessions but it is becoming increasingly difficult. Face recognition is one of the few biometric methods. It possesses the meritoriousness of both high accuracy sophisticated and largely software based technique analyzes unique shape, pattern, and position of the facial feature. It compares scan to records stored in the central or local database. Human resource management system provides the information concerning the employees in the company. The system facilitates good interaction communication facilities between the employees and human resource administration with the increasing effect of globalization and technology various function of human resource management function of human resource management system have become centralized in managing organizations effectively, hence organizations must fill information as any other resource or asset. For information to exhibit quality, it must be organized manage and scattered in a dominant manner. Human resource management system support activities such as identifying potential employees, maintaining records of existing employees. Human resource system helps senior management to identify manpower requirements in order to meet the organizations long term business plans and strategic goals.

As before there was no online attendance system introduced, so attendance of each employee was manually marked. Nowadays the attendance system is there for online attendance. Attendance management system is based on face recognition system and detection algorithms. It automatically detects the face of a user, when user login it recognized the face back facial expression or features of a face like a nose, eyes, mouth and marks the attendance of the user. As attendance is marked by each user then the salary is generated according to their attendance. Attendance and salary generation information all are directly going to the administrative database.

Human resource management (usually referred to HR) involves everything related to the employer-employee relationship and is about supporting and managing the organization people and associated processes it is seen as a core business functions essential to the organizations effective operation. Human resource is a term which is used in business related to people who work for that company or organization. It is also used to accredit to the department of a company which is responsible for managing those resources, like hiring and training new employees and survey the benefits and advantage package that provides to all of the company's employee. This term was composed in United States in the 1960s. Main work of an HR department is managing current employees and their performance, attendance. Everything is to be done by the HR department. In the human face has a particular shape that requires complex authentication in order to recognize it. Particular person is distinguished by their faces with which they are being analyzed, developing and distraction like glasses beard or change of skin colour may gradually vary face detection rates face verification represent one of the most used types of biometry. It proceeds as follows starting with calculating and subtracting specific characteristic then demonstrate them with the already existing database, in addition to obtaining a positive comparison between the compared face. After getting the face shape details the system composes them by using some algorithm models, finally face image are stored in the database and analyze using another algorithm the face recognition embedded system are very partial to be used in different application such as terrorist identification, security system, and identity verification access in fact, it is evaluated in many public and even dedicated areas.

II. RELATED WORK

In the recent years, we have seen variety of human resource management system apart from the traditional attendance system there is also the biometric system, the biometric system also comes in various forms there are finger print recognition device, hand recognition device, ID card recognition device and even facial recognize the device, but all these systems have to do some sort of work or may lack in security mark fake attendance or generate payment manually or maintain the register to overcome these the new system has to be developed which works automatically and improves the security and offers safety to an organization. The facial recognition attendance system is ideal for the daily attendance of employees in an organization. It would provide 100% accurate attendance details it is possible to set the system as per the requirement of your company. Once everything is set, attendance detail like time in, time out, half day, sick leaves etc, of an employee can be tracked easily. The attendance system recorded and saved in attendance system can be important to the payroll software. This system negates the need to calculate attendance manually, employee can be asked for leaves using this system the face recognition attendance system safety and security to the office premises, no need to spend money on stationary every month.

The proposed attendance system mainly consists of four phases image acquisition, face detection, feature extraction, face recognition generate the system which maintains, data management for human resource information system, data formats, data storage and retrieval, transaction processing, office automation, information processing and control functions, standard software and customized software. The proposed system has been implemented with the help of three basic steps first step is to detect and extract face image save the face image. The second step is to learn and train the face image and calculate Eigen values and Eigen vector of that image recognized and match face images with existing face images information stored in XML. Growing number of applications are using face recognition as the initial steps toward interpreting human actions intentions and behaviour as a central part of the next generation smart environment. Many actions and behaviour human's display can only be interpreted if you also know the identities of the individuals and the people around them examples are valued repeat customers entering a store behaviour monitoring in an elder care or child care facility and command control interfaces in a military or an industrial setting. In each of these applications, identity information is crucial to providing machines with the background knowledge needed to interpret measurement and observation of human actions.

Human resources are the most valuable and unique assets of an organisation. The successful management of organisation human resources is an effective and dynamic. The scarcity of talented resources and the growing expectations of the modern day worker have further increased the complexity of the human resource function.

III. ARCHITECTURE VIEW

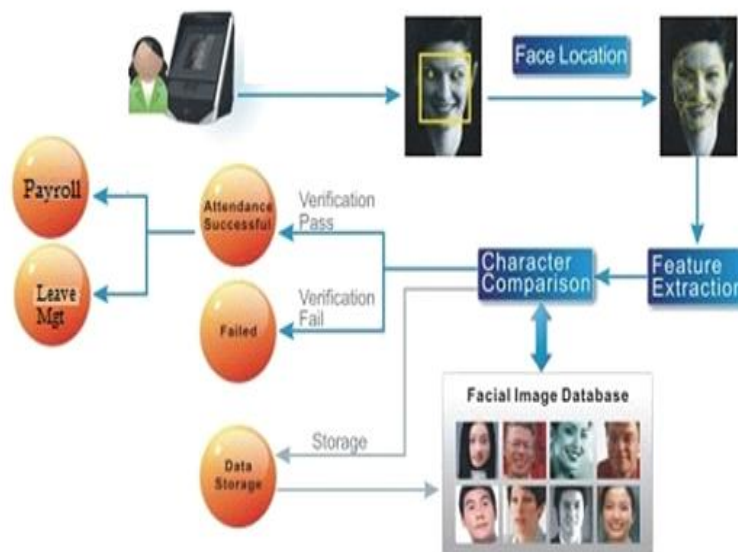


Figure1. Architectural View for Proposed System

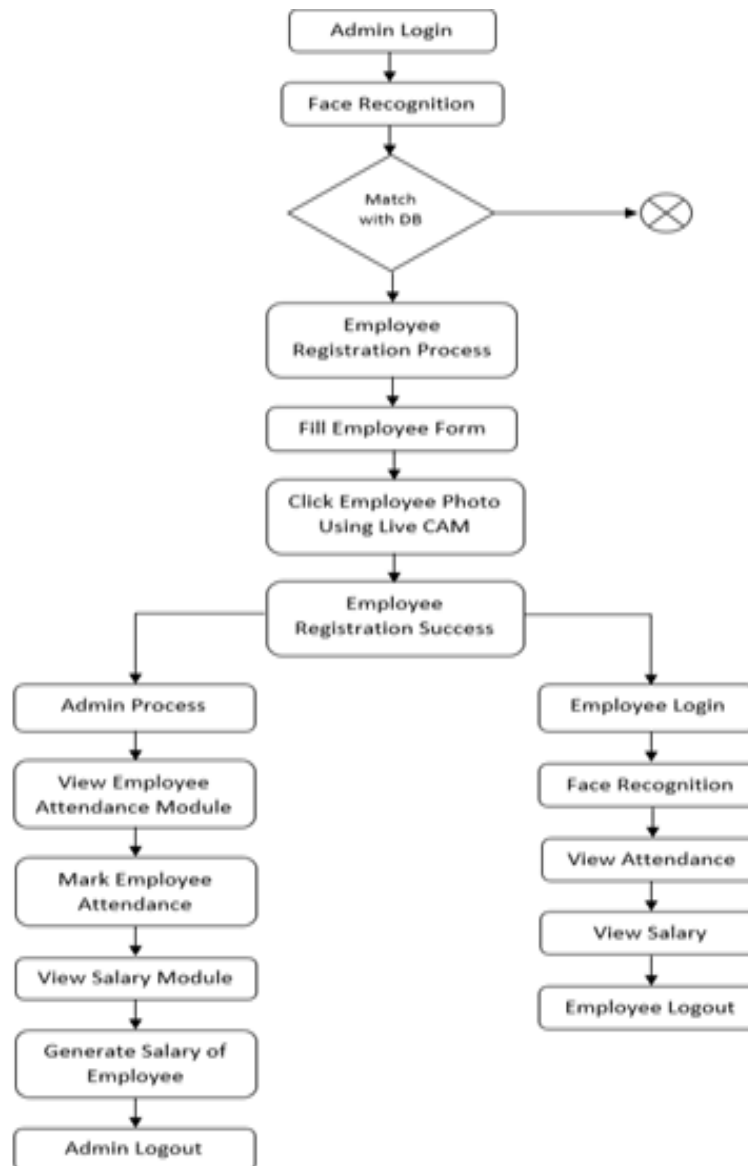


Figure2. DFD architecture

VI. CONCLUSION

An automatic human resource management system is a necessary tool for any organization, most of the existing systems are time-consuming and require semi manual work from the administrator. This approach solves by integrating face recognition in the process which reduces manual work and improves the safety of the organization. As the HRMS system is based on face recognition so it is completely trustworthy and there is no need to check it or assign a supervisor or security guard to monitor the system in all the HR function is still to a large degree administrative and common to all organizations. To verify degrees, most organizations have formalized selection, evaluation, and payroll processes. Efficient and effective management of the human capital pool (HCP) has become an increasingly imperative and complex activity to all HR professionals.

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