CHAPTER- 7

CONCLUSION AND FUTURE SCOPE

7.1 Conclusion

Recent security crises demands for a proper security system, this system acts not only as an attendance system but also a surveillance system. With use of automated attendance system attendance will be more smarter than actual process. It also send the message to the particular student/employee it contains information about attendance details. It will generate the hall ticket for students and salary for employees, it's based on requirements.

This system is developed for maintaining the attendance record. The main motive behind developing this system is to eliminate all the drawbacks which were associated with manual attendance system. The drawbacks ranging from wastage of time and paper, till the proxy issues arising in a class, are eliminated. Hence, desired results with user friendly interface is expected in the future, from the system. The efficiency of the system could also be increased by integrating various steps and techniques in the future developing stages of the system with use of enhanced algorithms and featured technical hardwares.

7.2 Limitations

1. System start misbehaving when the head count crosses certain limit.
2. System face recognition issues if the light conditions are poor.
3. Webcam and processor with high specification is required as system consumes a lot of resources.

7.3 Future enhancement

There are still a lot of ways this system can be developed more for a better safety and security system. Things that can be of future addition to the system are adding a proper warning system with continuous surveillance. Deep learning can be integrated for facial recognition, trained on a larger dataset. Also, making the device more compact by adding a mobile application for dynamic entry of a new user.

The research work has implemented a face recognition system by using LBPH face recognition algorithm. Often, its operation can be thought of as revealing the internal structure of the data in a way which best explains the variance in the data. By implementing the proposed face recognition system supplies the user with a lower-dimensional picture, a "shadow" of this object when viewed from its most informative viewpoint.

The algorithm has been tested with multiple students in the scene and also captured faces at different angles in the scene. The algorithm delivers quite good results but there is a room to improve the algorithm performance in case of large number of students and also in case of faces captured in a dark environment, so proposed system can be extended in the future to cover this aspect.

The efficiency of the algorithm also can be increased further so there is also a room for future work in this area. This system can be enhanced further in terms of achieving more efficiency by ease of analysis of patterns in the data.