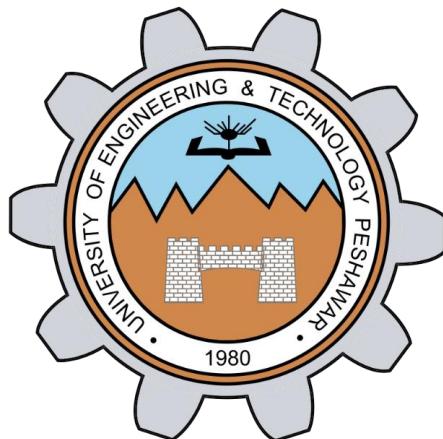


UNIVERSITY OF ENGINEERING AND TECHNOLOGY,
PESHAWAR PAKISTAN

Main Campus



Software Engineering

Lab Task

Submitted By

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Feasibility Report – Smart Attendance System using Face Recognition

1. Project Context

By utilizing facial recognition technology, the Smart Attendance System with Face Recognition seeks to automate the attendance process in workplaces and educational institutions. It lowers the likelihood of proxy attendance and does away with manual roll calls. Teachers, administrators, and students will all utilize the system to track and view attendance. Time waste and imprecise attendance tracking in conventional systems are the primary issues it resolves.

2. Technical Feasibility

Hardware Requirements:

- Face-capturing camera module (IP camera or HD webcam)
- Processing computer or server (minimum i5 CPU, 8GB RAM)
- LAN/Wi-Fi connection network router

Software Requirements:

- Python using the dlib and OpenCV libraries
- Database: Firebase or MySQL
- Framework for Web/Apps: Flutter or Django

Hosting: cloud (like HostBreak or PakHost) or local server

Availability & Compatibility:

In Pakistan, all software and hardware components are readily available and reasonably priced. Both OpenCV and Python are compatible with the majority of operating systems and are open-source.

3. Operational Feasibility

Teachers, students, and administrative personnel are examples of end users.

Training & Support: Staff members receive basic training on managing database entries and teachers on using the dashboard.

Opposition to Change: Some users can object because they are worried about their privacy or are afraid of being watched by cameras. Resistance will be reduced with the aid of awareness campaigns and appropriate data privacy regulations.

4. Economic Feasibility

Setup Costs:

Hardware: Rs. 80,000 (server + cameras)

50,000 rupees for software development

Annual Hosting & Maintenance: Rs. 20,000

Initial Total Cost: around Rs. 150,000

Expected Benefits:

- Saves ~15 minutes per lecture for attendance
- minimizes manual labor and does away with proxy attendance

increases efficiency and transparency

5. Conclusion

According to the aforementioned research, our project proposal is deemed practical due to the availability of the necessary technology, reasonable prices, ease of user adaptation following training, and the system's obvious operational and time-saving advantages over conventional attendance methods.

