Smart College

Smart Environment Leads to Innovation

Teachers Attendance nahi lagata? No Problem we have a solution.

Facial Recognition SMART ATTENDANCE

- We have built a Smart Attendance System to take attendance using the latest cutting-edge face recognition libraries.
- Our software uses Face recognition mechanism to mark attendance of the students as soon as they appear in the camera.
- We have used python and some other libraries to make that possible.
- Numpy, pickle and pygame are few libraries that we are using in our facial recognition attendance system

College man parking nahi milti? We offer Vertical parking

Smart PARKING SYSTEM

- On Entry a sensor detects the car and sends a signal to the Backend to open gate for incoming car.
- A 5 second timer starts to let the security team check the car.
- After Checking, gate is opened for the car. Same process repeats for leaving the college.
- After Checking Car is then allowed to use automated lifts.

Smart Lifts

- You Don't have to wait for the lifts.
- As soon as you step in the lift with your car, it starts moving after a short delay to ensure a secure experience.
- After reaching the destination a 10 second delay waits for the car to leave the lift.
- Our project offers 2 lifts, one to move from Ground to first floor, and the other to move from first floor to ground.

More Smartness? We offer an app.

App Control

- Our Project offers an app control system to control Small LEDs, Main Light sources and all the necessary doors to lock/unlock.
- We have used Blynk Cloud to get hands-on experience on app control.
- This App will be controlled by college admin to ensure safety and accuracy.

Koi college related questions ka answer nahi karta? We have an AI assitant

Jerry – AI Assistant

- Jerry is very fast in performing his tasks. Jerry can answer all your questions without any personal bias.
- Jerry is built using JavaScript Algorithms to ensure a fast communication rate.

- In our particular case he can also guide you to understand what we have built.
- Go say him Hi…

Life important ha ya education? …….

Hazard Detection System

- Smart College offers a hazard management system to inform students and staff about incoming dangers.
- It uses a buzzer as an alert system.
- Hazard Management uses Earthquake, Air quality, Flood detectors and Temperature sensors to collect data across the college.
- Then the Hazard Detection system algorithm decides what to do with the data.
- Hazard Detection system also uploads the data to the ThingSpeak Server to get a good view of the college environment.

Smart Technologies? We have embedded that -

Smart Rain Detection and Auto Solar Panel Rotation

- Smart College uses Rain detectors to detect the rain. After the rain is detected, a motor rotates in such a way to take care of the water coming down in the cafeteria.
    - This lets the students enjoy the weather in a peaceful environment.
    - Smart College also offers a plan to provide sustainable energy.
- According to recent research, placement and orientation of solar panels is just as important as which type of solar panel is used in a given situation.
- Our Algorithm uses 2 LDR to get the estimate of the sun's direction. Then servo motor rotates the solar panel in the direction of sun.

Surveillance Car

- We provide a surveillance car to track what’s happening in the college.
    - There is a camera attached at the front of the car.
- Live preview of the camera can be seen by Admin or higher authorities of the college.
- This provides the best solution to monitor the happening in the college

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Here is the article on the project on LinkedIn:

- **https://www.linkedin.com/pulse/smart-college-iot-project-muneeb-ul-karim-syszf/ or Click Here**

Here is the link to GitHub Repository for code:

- **https://github.com/MuneEbxPKPK/Smart-College or Click Here**

Here is the Link to Small Mega Folder for some pictures and video of the project:

- **https://mega.nz/folder/VEYFABQC#Yrs3mGbOgqM_eWazQAsaSQ or Click Here**

Here is a YouTube Playlist for some videos on the Project:

- **https://www.youtube.com/playlist?list=PLWeCbB33b_yjVHzSKjmT7qLh9iEGZ1RJP or Click Here**