



Keywords to Remember:

- Protocols:
 - WiFi
 - HTTP/HTTPS, GET and POST request
 - UART
- Modules:
 - ESP32 (+CAM)
 - FTDI Module (for UART communication and powering ESP)
 - ILED, BUZZER, DOOR lock
 - Single channel relay (for powering and controlling door lock with esp)

- Connections:
 - UART : Enable communication between our python code(or server) and ESP, when python code detect the person, it will esp message to esp via UART
 - Buzzer, LED, DoorLock - GPIO PIN 13 of ESP
- Steps to run:
 - First power the ESP and door lock
 - Then connect wifi to your system/laptop
 - Connect internet via USB TETHERING to your laptop
 - Run python code
 - Go to folder containing python code
 - Right click -> select open in command prompt -> enter this code : python [server.py](#)
- Python Libraries used:
 - For UART communication : serial (import serial)
 - For processing image, drawing boundary boxes, capturing video stream : OpenCV (import cv2)
 - For face recognition : insightface's FaceAnalysis
 - For sending telegram messages : Telegram API (from telegram import Bot)
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