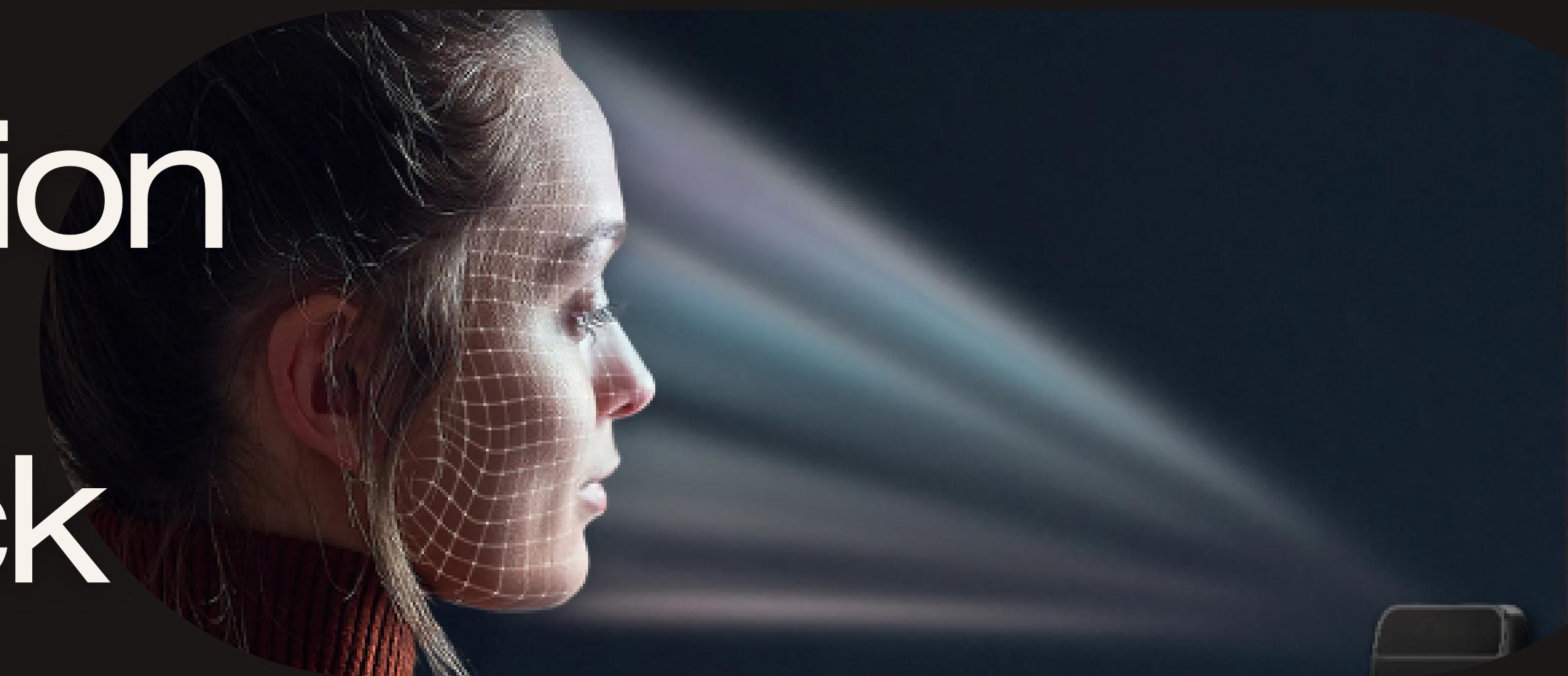
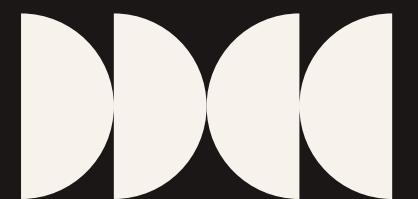
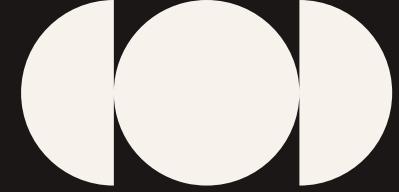


# Face Recognition Security Door Lock



By:  
**IntelliKey**





# Problem

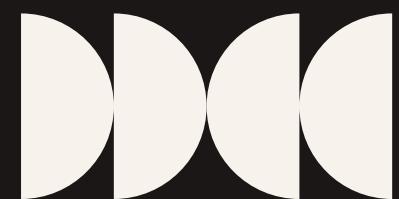


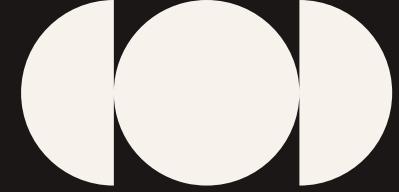
## **Vulnerabilities in Traditional Lock Systems**

- Issues with lost or duplicated keys.
- Risk of unauthorized access.
- Need for enhanced security solutions.



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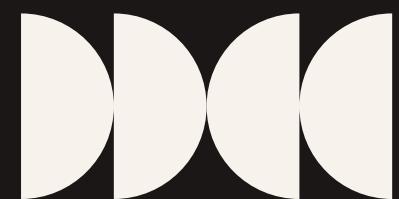
# Project Objective

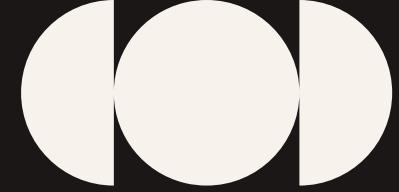


- Utilize advanced AI and facial recognition technology to authenticate individuals.
- Provide a modern, reliable alternative to traditional locks.
- Design the system to be easy to install, use, and maintain.



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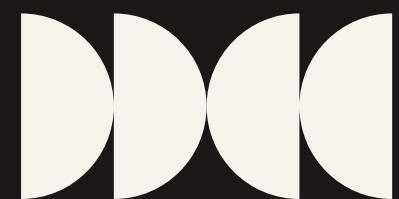


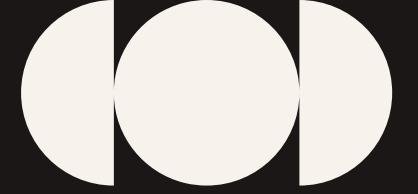
# Solution

The proposed solution involves the development of a face recognition security door lock system using ESP32-CAM, an AI-powered microcontroller with a built-in camera. This system will authenticate individuals based on facial features, granting access only to recognized users. Upon detecting a face, the ESP32-CAM will capture an image, process it using AI algorithms to identify the individual, and then trigger the door lock mechanism if the person is authorized. The system logs access attempts, including successful and unsuccessful authentication attempts.



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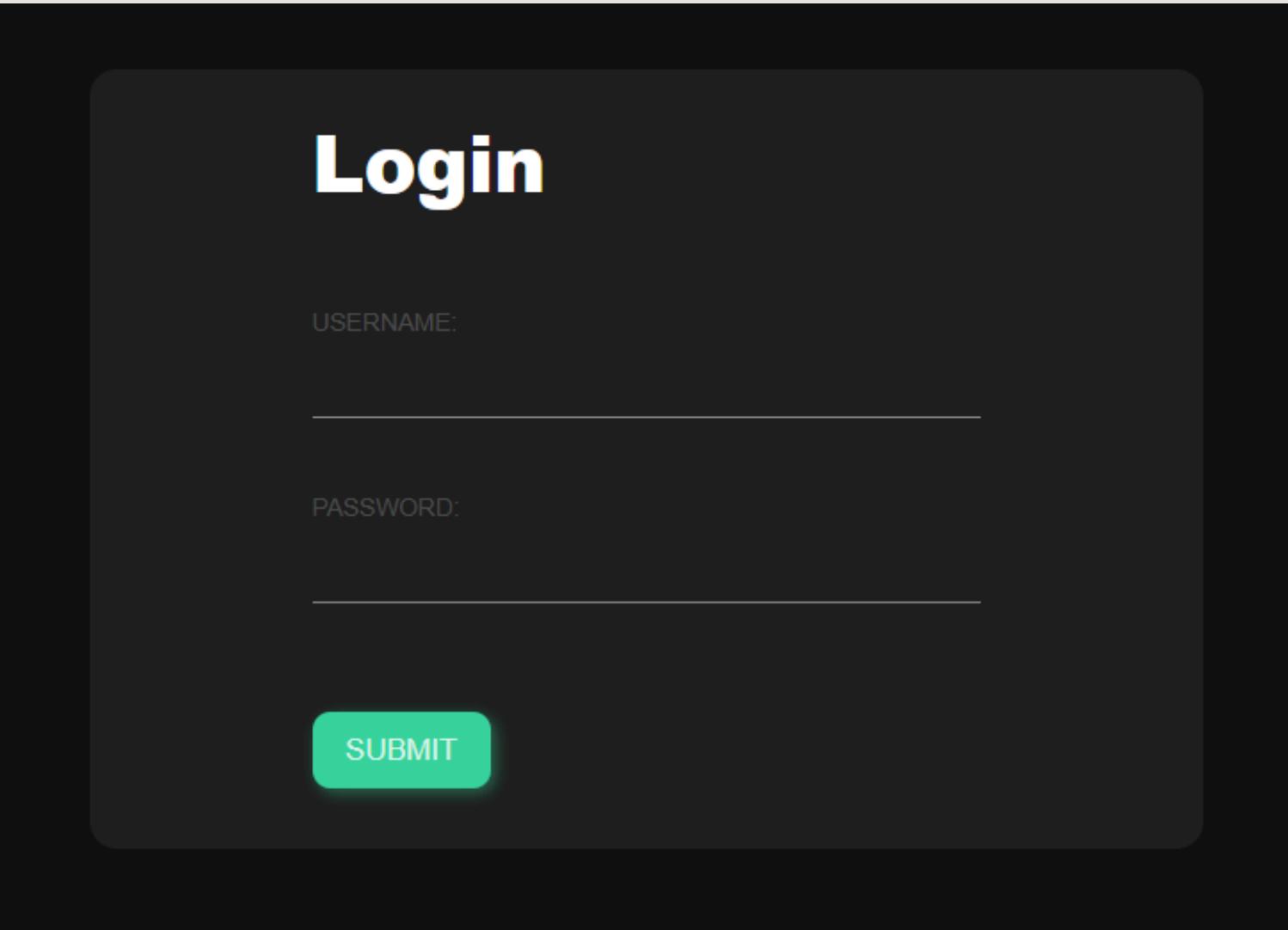




# Flow of Solution

01

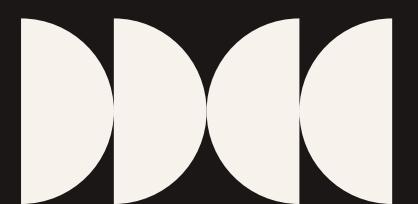
**The user logs into the system via IP address**

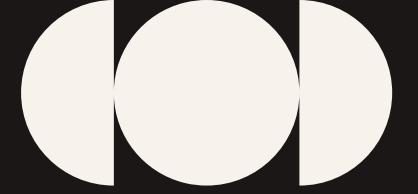


A screenshot of a login interface. The background is black. In the center is a light gray rounded rectangle containing the word "Login" in large, bold, white font. Below it are two input fields: "USERNAME:" above a horizontal line and "PASSWORD:" above another horizontal line. At the bottom is a green button with the word "SUBMIT" in white capital letters.



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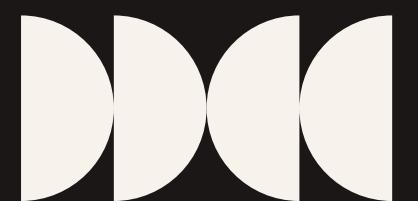
# Flow of Solution

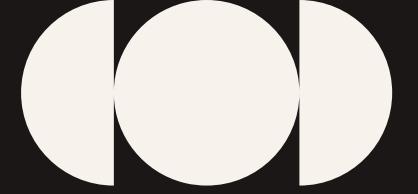
02

**The ESP32-CAM captures the user's facial image and stores the captured facial image in the database of authorized users.**

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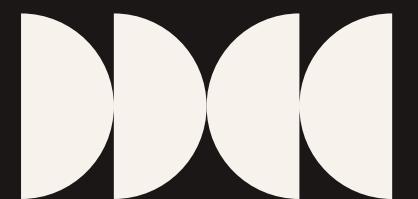
# Flow of Solution

03

If the detected face matches an authorized user, the system triggers the door lock mechanism.

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# DDC Demo



Not secure 192.168.43.230

IntelliKey Demo

AUTHENTICATED

Type the person's name here

STREAM CAMERA DETECT FACES

ADD USER ACCESS CONTROL

Captured Faces

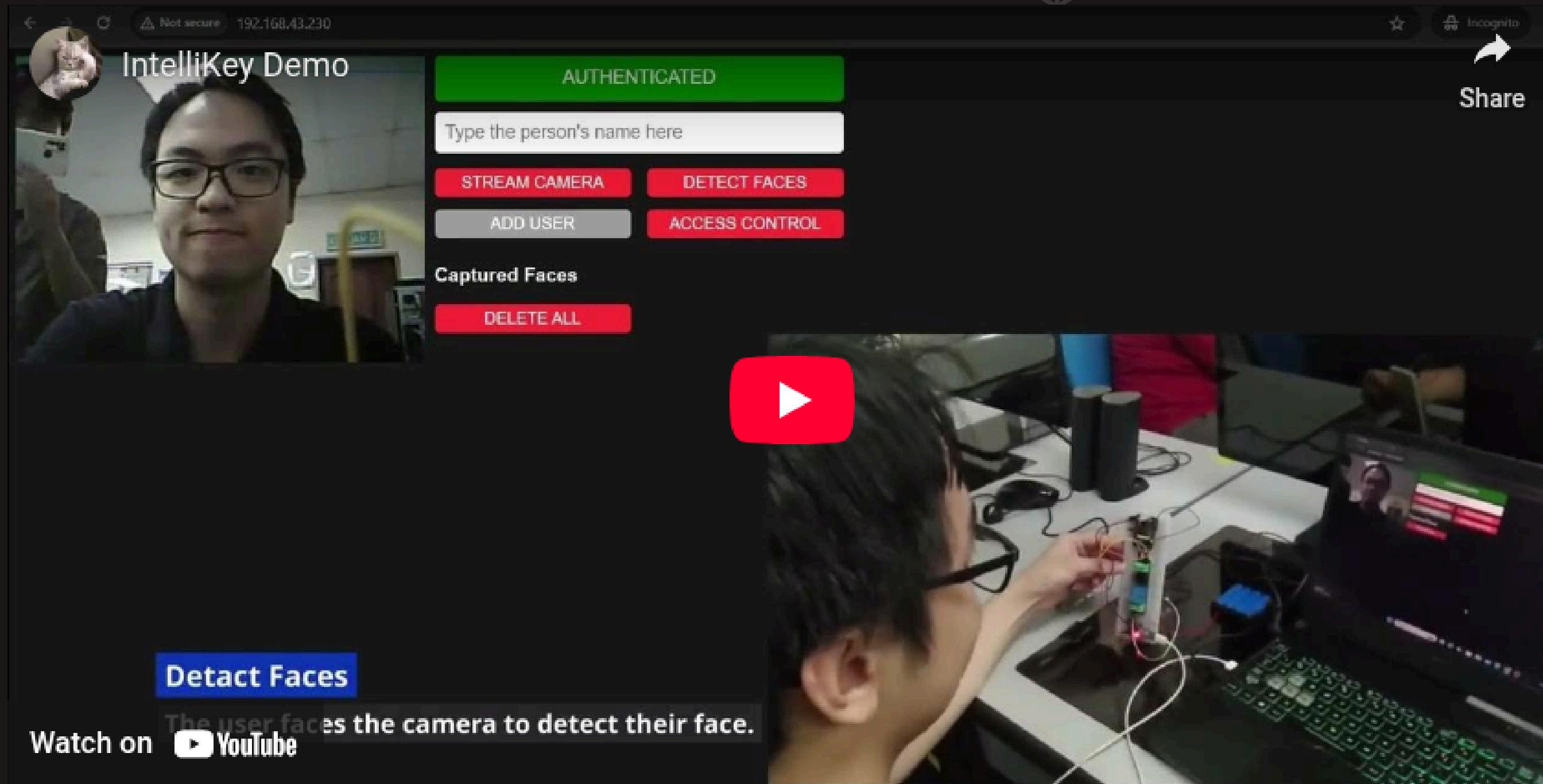
DELETE ALL

Detact Faces

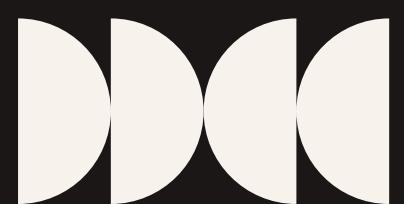
The user faces the camera to detect their face.

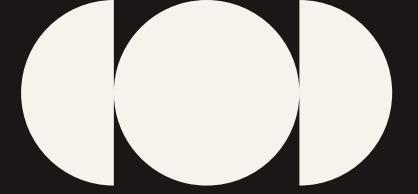
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# Thank You



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