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SMART DOOR UNLOCK SYSTEM USING FACE RECOGNITION

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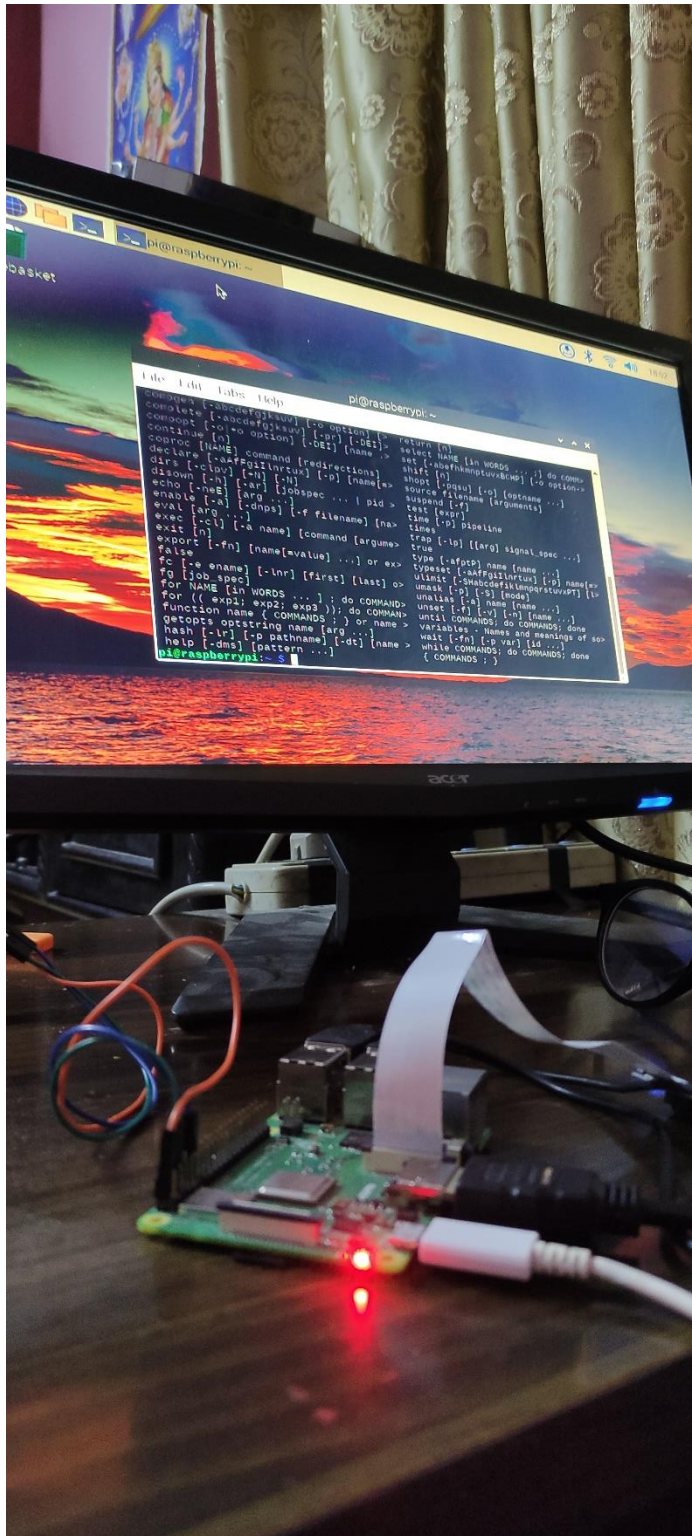
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In today's era of automation and smart devices, there is a critical need to change system security measures because privacy and security are significant issues in the information industry. system. It is difficult to place blind trust in traditional and The system's security measures are simple. In the conventional system, Many of the doors have mechanical locks that were installed. The number of keys is limited. This article suggests Face Recognition-Based Smart Door Unlock System increases security The camera sensor is used in this system to The face will be captured, and an image matching algorithm will be used.to recognize the authenticated faces Only the individual whose face is matched, the door can be unlocked. This system will not only improve security but will also make The system is keyless. The proposed system will be strong from the start. hacking attacks, as we propose a machine learning-based solutions approach.

In this work, we present a face recognition door lock system for security purposes based on the Raspberry Pi. The technology is being implemented to see if any unknown people are approaching the door. With the help of the Pi camera Raspberry Pi platform, we were able to establish contact with electronic gadgets using facial detection. Python and Open CV libraries are used to code software. We presented the Haar classifier approach for face detection to generate an accurate and clear picture of an intruder. When a person approaches the door, the pi camera captures the image and performs a face detection method. If the image matches the database images, the door is unlocked; otherwise, a message with the person's photo is sent to the registered mobile through GSM and LAN network

Further, This system is so promising but has its pros and cons. Certain challenges are also faced when we use face detection such as lightening, varying brightness. The main advantage of this system is acquiring the door using a face detection approach and the entire face is recognized. Face recognition technique involves attribute extraction from a facial image with help of smart door model an intense innocence is expected in the security industry and to make daily objects synergistic

Figure 1. The figure (if any) should be with adequate resolution. The caption should be written this way, leaving a line space between the figure and the caption, the figure



Category applied: I (Undergraduate to Ph. D. students and non-student) II (Grade 9 to 12 students) Theme: Artificial Intelligence and Computing