Secure Door Lock Milestone 4 Presentation

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Milestone 4 Task Matrix

Task	Percent Completed	James	Christopher	Luke	Warren	To Do
Facial Recognition	100%	20%	40%	20%	20%	
Implement Camera Drivers	40%	20%	20%	40%	20%	
Backend endpoints	60%	20%	20%	40%	20%	
System Integration	50%	40%	20%	20%	20%	
.apk design modifications	80%	40%	20%	20%	20%	

Milestone 4 Task Discussion

- Facial Recognition
    - Changed the model to recognize the difference in two faces instead of detecting if it is a face
    - Updated the confidence model to weigh for false positives and true negatives
- Camera Drivers
    - Started to incorporate the drivers into the overall system architecture
    - Tested and debugged the drivers to make sure they meet the minimum requirements
    - The driver is not fully implemented but it can be used to capture, process, and transmit images and video data to other parts of the system.

Milestone 4 Task Discussion

- Backend Endpoints
  - Refined routing for handling incoming requests
  - Routes handle Authentication, Login, Dashboard navigation and reAuth.
  - Finished setting up a SQLite database to store the needed information for both user profiles and device information.
- System Integration
  - Began to connect the hardware with the server and the mobile application.
  - Ensured that communication between components was occurring and sent video from hardware to the server.
  - Connected the lock to the Raspberry Pi and the camera.

Milestone 4 Task Discussion

- .apk Design Modifications
  - The color scheme was adjusted
  - Buttons were relocated to make the pages more intuitive to navigate.
  - Styling aspects were refined to give the sense of a more professional application.

Milestone 5 Task Matrix

Task	James	Christopher	Warren	Luke
Video Streaming to app	20%	20%	20%	40%
Mobile app unlock/lock	30%	20%	20%	30%
Facial recognition classification visible on app	20%	40%	20%	20%
Usability Testing	40%	20%	20%	20%
Security Testing	20%	20%	40%	20%
Project Board	25%	25%	25%	25%

Milestone 5 Task Discussion

- Video Streaming to Application
  - Allow for real-time video streaming from door lock to mobile application
- Mobile Application Lock/Unlock
  - Lock/Unlock buttons on the mobile application will be connected via the server to the door lock
  - Allow for user to Lock/Unlock the door from the mobile application
- Facial Recognition Classification Visible on Application
  - Notification will appear in mobile application informing user whether or not a person at the door is recognized
  - Clicking on notification will take the user to the Lock/Unlock
- Complete Project Board
  - Complete the project board for the Student Design Showcase

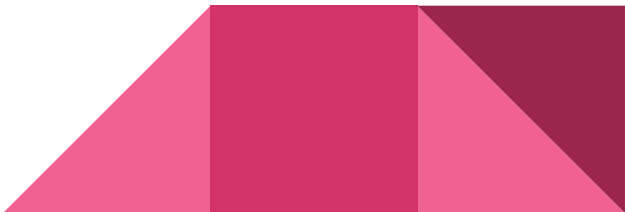# Milestone 5 Task Discussion

- Usability Testing
  - Ensure all features of the application are working
    - Unlock/Lock Buttons should unlock/lock the door lock
    - Clicking the button to view the live video brings up a live view of the door lock
    - Notification should be sent to users phone if someone is at the door
    - Facial recognition labels recognized faces as recognized and unrecognized faces as unrecognized
- Security Testing
  - Ensure only user that owns the door lock can access the features of the door lock
  - Ensure that door lock cannot be added to multiple accounts
  - Ensure that user authentication system cannot be compromised
- Complete Project Board
  - Complete the project board for the Student Design Showcase

Thank you. Questions?