TITLE :SECURE BANK TRANSACTION USING FACE IDENTIFICATION SYSTEM

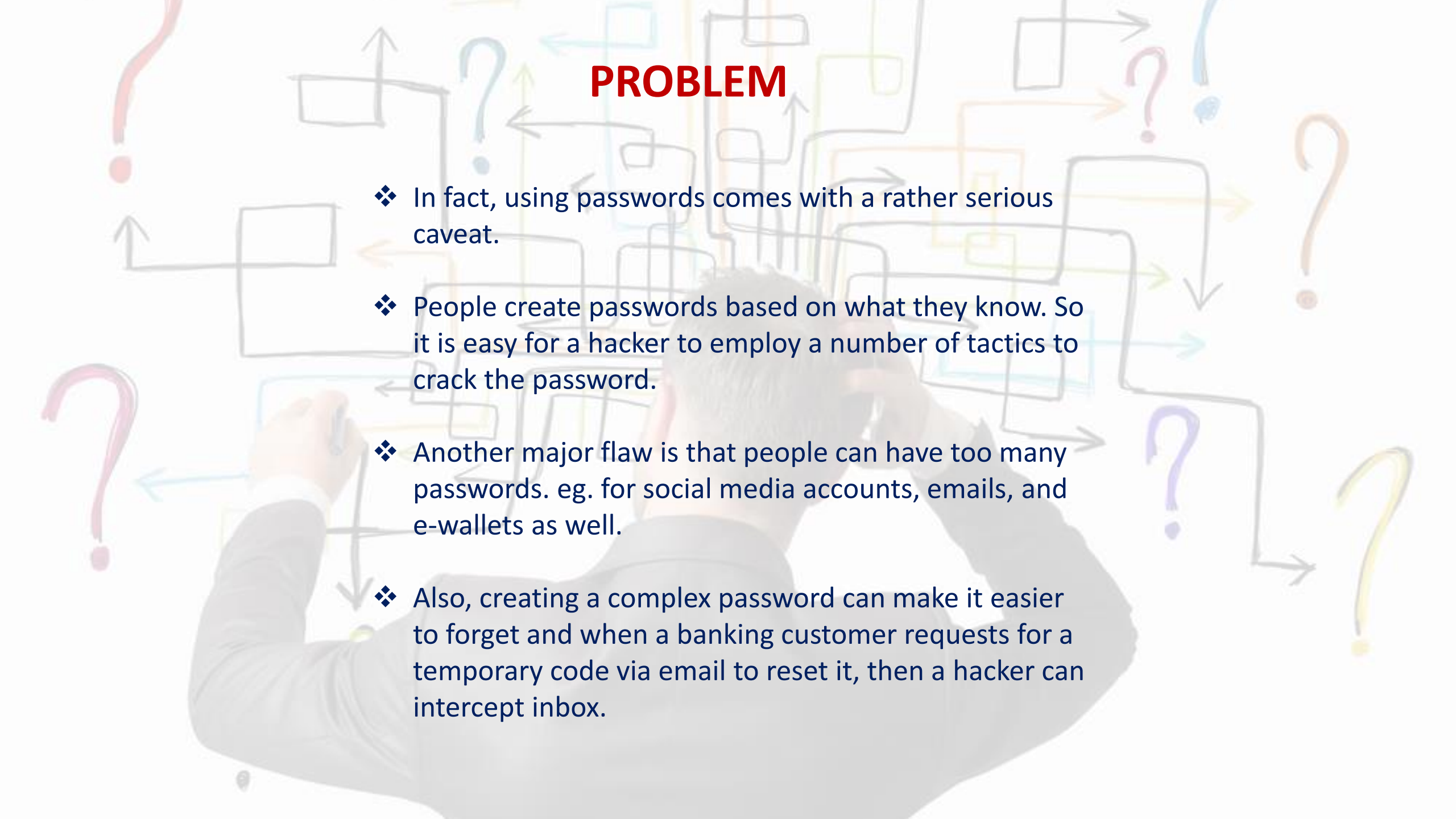
TEAM NAME: GEMS OF LIFE

THEME: DEFENCE AND SECURITY

- Myself Samuel from Prince Dr k Vasudevan College of Engineering and Technology.
- We work for enriching the worth of every people’s life and satisfy every clients need.
- We always relay on it, “Kindness is repaid with kindness”

PROBLEM

- In fact, using passwords comes with a rather serious caveat.
- People create passwords based on what they know. So it is easy for a hacker to employ a number of tactics to crack the password.
- Another major flaw is that people can have too many passwords. eg. for social media accounts, emails, and e-wallets as well.
- Also, creating a complex password can make it easier to forget and when a banking customer requests for a temporary code via email to reset it, then a hacker can intercept inbox.



SOLUTION

- This paper uses machine learning techniques to get a high degree of accuracy from what is called “training data”.
- Haar Cascades use the Adaboost learning algorithm which selects a small number of important features from a large set to give an efficient result of classifiers. Initially, the algorithm needs a lot of positive images and negative images (images without faces) to train the classifier.
- Then we need to extract features from it.

INNOVATION

- ✓ The key advantage of a Haar-like feature over most other features is its calculation speed.
- ✓ Haar Cascade is a machine learning object detection algorithm used to identify objects in an image or video
- ✓ Haar Cascades use the Adaboost learning algorithm which selects a small number of important features from a large set to give an efficient result of classifiers.

- ✓ Enhanced security.
- ✓ Faster processing.
- ✓ Seamless integration.
- ✓ Automation of identification.
- ✓ Breach of privacy.
- ✓ Vulnerability

MARKET AND ITS SCOPE

- For this, haar features shown in below image are used.
- They are just like our convolutional kernel.
- Each feature is a single value obtained by subtracting sum of pixels under white rectangle from sum of pixels under black rectangle.
- We introduced the concept called SET-Secure Electronic Transaction which includes symmetric cryptography, asymmetric cryptography and hashing techniques.
- Here the cardholders or the users can decide their own asymmetric key that is to have their own private key.

INNOVATION AND ITS SCOPE

- Realized a reliable, real-time face recognition system on machine learning.
- According to the new technical era, some advancement has taken place and some techniques of facial recognition have achieved popularity.
- We are using Haar cascade algorithm for face recognition.
- Capture module deals with the configuration of video interface and performs the real-time video capture.
- Face Detection module analyses each captured frame and extracts valid faces from each frame.

COMPETITIVE LANDSCAPE

- Face Identification deals with face recognition and verification of the detected face.
- The proposed system uses the technique of machine learning to attain the high degree of accuracy on training data.
- Face detection and face recognition are the most important modules to be processed for the secure transaction purpose.
- Though the proposed system has high degree of accuracy and security at each modules of face recognition and pin generation, still there exists the drawback which has to be reduced by using enhancement techniques.
- The existence of fake user is possible in the proposed system due to registration made by unauthorized users for fraudulent access.
- In Future any fraudulent access by the fake user is eliminated with the help of radio frequency identification card.

BUSINESS MODEL

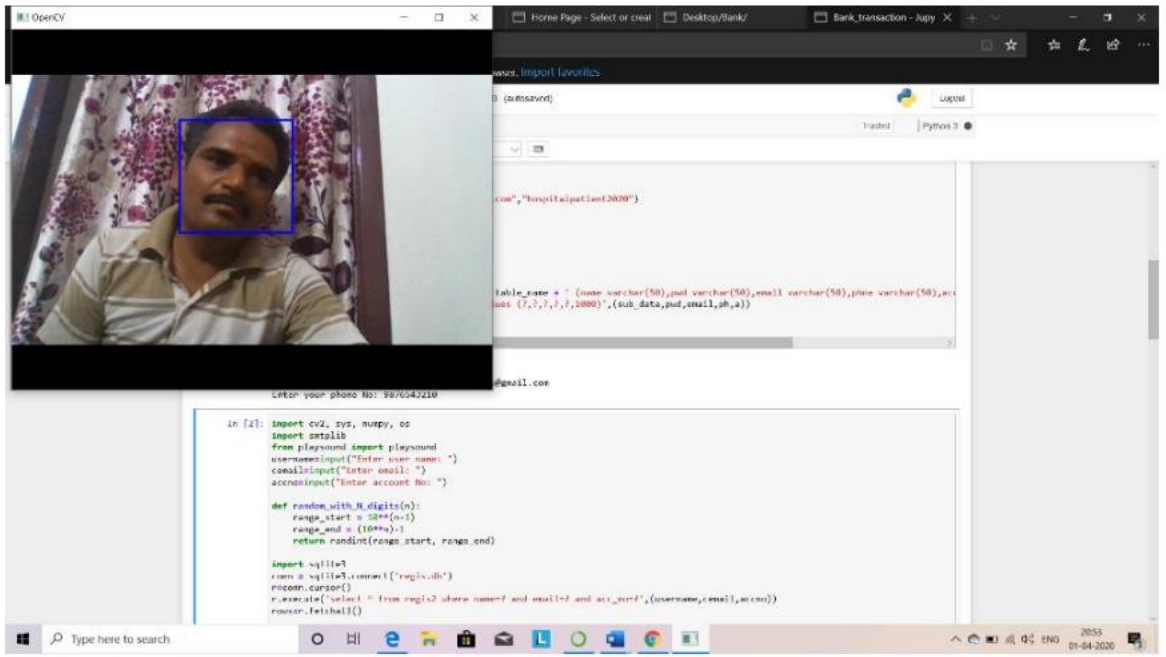
- ✓ In this study, we introduced a facial recognition system to provide a secured and reliable bank transaction.
- ✓ The introduction of the deep for facial authentication had proven to be effective in maximizing security level when performing banking transactions.
- ✓ It is expected that the security level of mobile banking to increase with the employment networks for face authentication.

SAMPLE PICS - A

Registration

```
Enter your name: mani
Enter password1999
Enter your Email Address: monicaasreemanju@gmail.com
Enter your phone No: 9876543210
Register successfully and here is your AccNO:  9760174343040469
```

Face Recognition



SCREENSHOTS - B

Email Acknowledgement

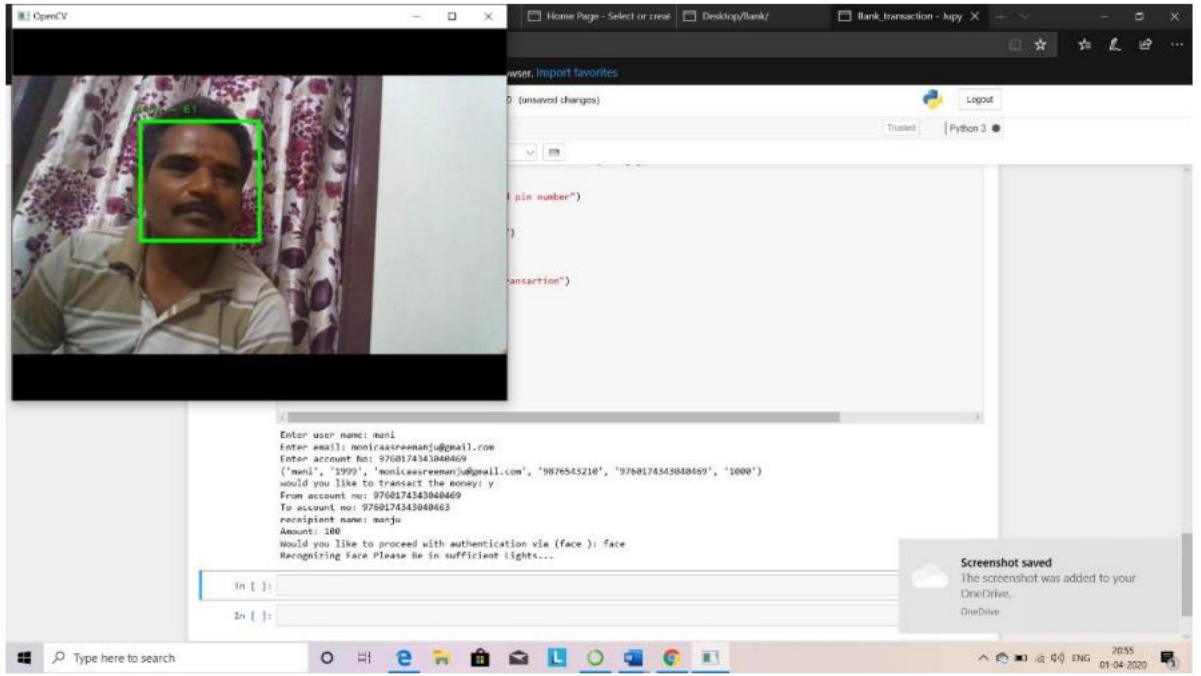
(no subject) Inbox ×

hospitalpatientinfosys2020@gmail.com
to

9760174343040469

Reply Forward

Face Detection



Pin Generation

(no subject) Inbox ×

hospitalpatientinfosys2020@gmail.com
to

8979

Reply Forward

SAMPLE PICS - C

Transaction

```
Enter user name: mani
Enter email: monicaasreemanju@gmail.com
Enter account No: 9760174343040469
('mani', '1999', 'monicaasreemanju@gmail.com', '9876543210', '9760174343040469', '1000')
would you like to transact the money: y
From account no: 9760174343040469
To account no: 9760174343040463
receipient name: manju
Amount: 100
Would you like to proceed with authentication via (face ): face
Recognizing Face Please Be in sufficient Lights...
Enter PIN: 8979
transaction done!

your current Balance:  ('900',)
```

TEAM MEMBER DETAILS

1. SAMUEL SOLOMON (B.E/ CSE) {Co-Ordinator} 3rd year TEAM LEADER
2. NANDHINI.D (B.E/CSE) {Content Creator} 3rd year TEAM MEMBER
3. ASWATHNARAAYANAN.S (B.E/CSE) {Software Developer} 3rd year TEAM MEMBER
4. SHARMATHI.S (B.E/CSE) {UI/UX Designer} 3rd year TEAM MEMBER
5. SURYA.S (B.E/CSE) {Full Stack Developer} 3rd year TEAM MEMBER

TEAM MENTOR DETAILS

1. **DR. G.N.K.SURESH BABU** **ACADAMIC** ML AND BLOCKCHAIN 10 YEARS

TO KNOW MORE ABOUT US, CLICK ON IT:

Samuel's Portfolio (samuelgladly.github.io)