

**HACK THE HOURGLASS**

IDEA SUBMISSION

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| **Team Details** | **Team Leader: -**   |  |  |  | | --- | --- | --- | | Leader Name | Email | Contact-No | | NEERAJ PANDEY | np10121999@gmail.com | 9560671978 |     **Team Members: -**   |  |  |  | | --- | --- | --- | | Team Members Name | Email | Contact-No | | LOKESH KUMAR | lkumar10780@gmail.com | 9560449581 | | UTKARSH BAHUKHANDI | Utkarshbahukhandi0002@gmail.com | 9599406282 | |  |  |  | |
| **Name of the Idea** | FACE\_SCAN\_PAYMENT SYSTEM |
| **Theme** | **ARTIFICIAL INTELLIGENCE** |
| **Problem Description** | The problem statement is that sometimes users may forgot their passwords while making transactions online in restaurants, malls, etc. And sometimes, they might forget their debit card and credit card at home. To make life easier for people, we are going to design an one application system(TKINTER APPLICATION) that perform user’s Face scan to make payments into bank account of restaurants or malls.  NOTE : This one application system should be installed in all branches of particular restaurant or malls like KFC or pacific. |

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| **Solution Description** | Here we made a system(ASSUME PYTHON TKINTER GUI APPLICATION) that would perform face identification with the image data available.  It will access available image data from our bank solution website. We were assuming that we are any bank, and have our website(bank solution) that would ask for login/signup. After login it will verify account number, debit card no. expiry date, phone no., etc means all required bank details with its data. So those users who have account in our bank and also have their account in our bank solution website.  Note : User has to upload his/her image having FACE like passport size image  Then our system(TKINTER APPLICATION) will access all the images and each phone number, user name associated with particular image.  Step 1) Firstly, our system installed in restaurants or malls asks to scan user’s face.  Step 2) Then, it will perform liveness detection by capturing eye blinks  Step3) After liveness detection, it will take one screenshot from scanned video  Step 4) Then it will perform match(face match) b/w this screenshot with the images available one by one.  Step 5) After finding a match, it will ask for u to enter your phone number and amount you want to pay.  Step 6)Finally click on submit button to pay money successfully, and amount will be deducted from user’s account. |
| **Work Done So Far** | Until now, we have not accessed data from the bank solution website but created a fake data in system application. And our website is also ready. Now our system is able to perform liveness detection and face matching then making payment for the user. |
| **Challenges We ran into** | Finite no. of challenges we faced, some are given below:  1) In developing IDEA for this project.  2) In getting files that we are used here for complete live detection and face recognition.  3) In providing security upto some extent. |
| **Plan for next 12 hours:** | Plan is simple, that we are going to improve this big project by doing following things:  1) we would try to improve this website for security purpose.  2) we would try to improve our system application by linking it to the website that we have made.  3) we are going to make this project to some higher advance level. |
| **Application of the solution** | Applications are given below:  1) It would make life easier for people.  2) It will make our country progress in the field of AI.  3) It will move our country to think about how they can provide this facility to the public as soon as possible .  4) User can make payment only with just his/her face and phone number. |
| **Technology used and its purpose:** | For making website  1) FRONTEND -HTML, CSS, BOOTSRAP  2) BACKEND -DJANGO  For making system application, following python modules we used here:  1) import tkinter as tk  2)from tkinter import font  3)from functools import partial  4)import numpy as np  5)import cv2  6)import imutils  7)import threading  8)import face\_recognition  9)from PIL import ImageTk, Image  10)import dlib  11)import os  12)import time  13)import sys  TWO IMPORTANT FILES AS WELL  1) openh264-1.8.0-win64.dll  2) shape\_predictor\_68\_face\_landmarks.dat |
| **Uniqueness of the idea** | IDEA IS pretty much unique. By the way , we as team take this idea from country china. These kinds of system had been used there since years.  We read the blog and got the idea, BY having just idea, we started working for this project, no matter how much hard or easy is this. |
| **Project Links** | |  |  | | --- | --- | | GitHub Repository Link | NIL | | Video Link | https://youtu.be/2fQJd39xflE | | Website Link (if hosted somewhere) | NIL | | Others (Like google drive etc.) | https://drive.google.com/drive/folders/1a3-mEPDv-XMU\_3A0i89Qac9CTNTYtUny?usp=sharing | |