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Smart Collins - Receptionist

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ABSTRACT

We seem to be entering the golden era of knowledge engineering and machine learning, where tech giants like Google and Apple are introducing AI into everything like Amazon echo, which are both conventional and affordable. We are trying to depict the same functionality in our project which will work on “Smart Collins (Receptionist)” eliminate the need of manual receptionist. Reception simply means the place inside the hospital, hotel or office building where guest or visitor arrives. The paper attempt to describe the face detection, speech recognition, faces recognition and database. When this software is implemented the data about the person who checked at the receptionist is recorded either, it is the manual information such as name, appointment Categories or voice and image of the person hence, this help to improve the forensic investigation anytime if the unlawful act happen.

Keywords : Face Detection, Speech Recognition, Face Recognition

I. INTRODUCTION

The main objective of this paper is to light on the emerging topic of today. Sphere such as face detection focuses on the detection of human faces. There are multiple methods in which facial recognition system works, here in this paper we are discussing our algorithms of how our face and speech recognition are going to work.

The database or dataset is the heart of project, implementing a data management system promotes an integrated picture of an organization operation. It is easy to see how processes are one segment of organization affect entire segment. We are not presenting detailed description of system or mathematical formulation but, rather we are presenting the unique and novel features of selected system and related pros and cons. Smart Collins (receptionist) is software, which combines the

concept of Face Recognition, Speech Recognition and providing the facility to book an appointment of patient by interacting with them automatically. This idea will help to emerge the general concept of AI in day to day life. Practically, this idea can be implemented in large places to provide smart receptionist. Here ‘Digital Forensic’ is a process of uncovering and interpreting the electronic data. Electronic data is about the suspected person that is accused for the crime; this can be any contact log of the person, recorded video, images and voice. When this software is implemented the data about the person who checked at the receptionist is recorded either, it is the manual information such as name and an appointment categories or voice and image of the person, hence this is help to improve the forensic investigation anytime if the unlawful act happens .Computer-based, face detection and recognition systems are rapidly spreading in various sectors such as malls, universities, ministries and

medical field. The goal of this project is to build software that can detect and recognize faces of people using image-processing techniques and book an appointment of people by communicating with them. Speech recognition play an important role in this project by asking basic question to patient and the more important task is to listen the patient and process their voice properly and convert it into textual form. The software will create a text file that contains basic detail of patient and record of all appointment and store it in the database. Working principle of Speech Recognition is based on, the algorithm of Acoustic and language modelling.

II. METHODS AND MATERIAL

This system have Python-Face recognition technique which is used to recognition face for identifying the person who visited to the hospital. It uses camera to capture image that image after capturing the system will ask question for fixing an appointment. This will use speech recognition and store the information of the person in database.

For the implementation of this software we use different modules, they are given below:

Module 1: Face Detection

Face detection is technology used to identifies the human face and convert it into digital face. For this module we use opencv library. Opencv (open source computer vision) library which perform the operation related to image.

Module 2: Speech Recognition

Speech recognition is process in which computer record the voice of human understands that for the further process. (Conversion into text)

Module 3: Face Recognition

Face recognition is capable of identifying or verifying the person form digital image, they work by comparing the facial feature.

Module 4: Database

Data store very large no of record efficiently. It is very easy to find information whenever necessary.

Module 5: TkInter:

This module is use for making graphic user interface (GUI).It is a standard python interface to the TK GUI toolkit shipped with python.

III. RESULT AND DISCUSSION

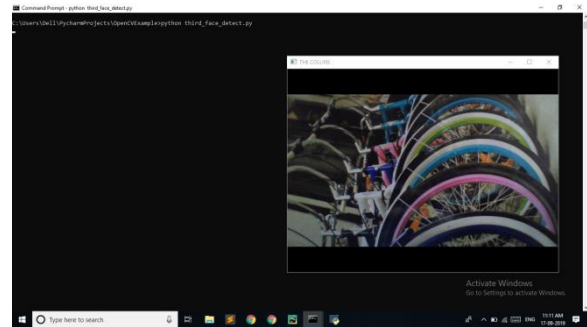


Figure (1)

Figure (1) shows the condition which is applied on our project. If no one is present in front of camera, then will not capture anything until and unless a human face is detected.

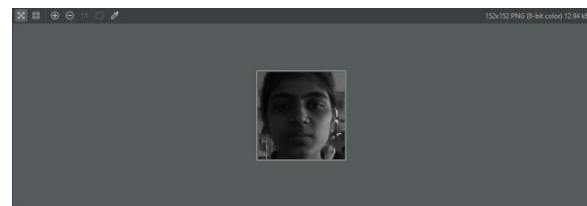


Figure (2)

Figure (2) shows the satisfaction of the condition in which if human face is detected then it will capture the image and show it on the screen.



Figure (3)

Figure (3) shows the multiple images of a single person to verify the facial feature of the person and store the images in the database for the further use.

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text: Good Afternoon!
text: Hello Dear, I am smart collin.
text: Tell me details for booking appointment
text: What is your name Dear?
Listening...
User: Amina
text: Amina
text: Is your name is correct
Listening...
User: yes
text: What is your age Dear?
Listening...
User: 21
text: Okay Dear, Your appointment get fixed.

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Figure (4)

Figure (4) shows that once the image is captured it will ask the detail of that person for booking of an appointment.

IV. CONCLUSION

In this paper, the image recognition and speech recognition are discussed which are important in real time system, while the project is based on block chain technology, which is comprehensively discussed in this paper. The main aim of receptionist by the AI based system can be achieved by python opencv services and in depth knowledge of general theories. Thus in future, the hospital appointment system and other offices where appointment system are needed automation will be completely based on the reference of our piece of work

V. REFERENCES

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