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SPARKLING BUDDY

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Abstract- This paper deals with the implementation of Simple Algorithm and proposed system which can help the human being in replacing as well as enhancing the traditional way of Receptionist. As its name suggests that Smart Buddy means an assistant who can help us in doing our job in Smart manner. Smart Buddy is an Artificial Intelligence and Machine Learning based chat boat which is mainly developed to work where there is need of Human Receptionist. The role of Smart Buddy is same as that of Human Receptionist with use of some emerging technology which can result into removing all the drawbacks of traditional way of receptionist. As the system is Artificial Intelligence and Machine Learning based it will make the use of all the features of this domain to make the device smart. The system will make the use of Image processing, Speech recognition for capturing the image of the end user and voice input respectively. It will also make the use of various kinds of sensors like heat sensor, temperature sensor, and camera for various purposes.

Keywords: *Knowledge Database, Artificial Intelligence, Machine Learning, Image Processing. Artificial Intelligence.*

I INTRODUCTION

Sparkling Buddy is an AI and ML based device which is used where there is need of receptionist. Sparkling Buddy takes the image of end user as an input at the time of registration of that particular person and store that image into its knowledge database for future reference. We can asks the questions to that device like we asks to human receptionist and it will answer all the questions in audio format.

The speech recognition technique is used in this device to perform this task and the device is trained in such a way that it can answer all the questions by referring to its knowledge database. Knowledge database is the database where all the questions and data is stored for future reference and processing of asked query as well. If any user asks any query then the device will simply check with its knowledge database for the solution of asked query and return the output to user in audio format and if it the solution is not present in knowledge database then it will contact to the higher authority with email. The higher authority depends where the system is being used i.e. Hospital, Bank, Offices, etc.

When the user asks the query in audion format it gets that query and convert it into text format then it processes that query and return the output to user into audio format. Various speech recognition and image processing algorithms are used to do so.

Motivation

The main motive behind developing this device is to provide the 24*7 assistance which is not possible by using traditional approach. Also as a result of this it also results into reducing the cost as it is one time cost and we don't have to waste our money on human salary which will be too much as compare to this device. And another motive is to reduce the man power as well because humans are most error prone and they are not eligible to perform the task like machine with that much of consistency so using machine for this purpose will be effective.

II RELATED WORK

IVAs evolved from chatbots, software agents programmed to converse with humans through either text or voice (en.wikipedia.org/wiki /Chat bot). The first chatbot, ELIZA, was developed by Joseph Weizenbaum at MIT 16 years after Alan Turing first proposed his test of artificial intelligence in 1950. ELIZA used natural-language processing to recognize key words in typed input and generate pre-scripted responses that to some users resembled human understanding. PARRY , introduced in 1972 by psychiatrist Kenneth Colby, convinced a number of trained experts that it was a real person with paranoid schizophrenia. Over time, chatbots such as Alice (the inspiration for the film Her), Jabberwacky, and Cleverbot incorporated increasingly sophisticated algorithms to create more natural and complex dialogue. Motivated by research indicating that most users prefer to interact with human-like programs, simple chatbots are now integrated in many phone systems and web applications for customer service, information retrieval, marketing, education, entertainment, and other purposes. IVAs extend chatbot functionality to Internet of Things (IoT) devices. Thus, they respond to text and voice commands to answer questions, play music and videos, purchase items, make recommendations, provide directions, turn on lights, open garage doors, and so on (en.wikipedia.org/wiki/Virtual assistant_(artificial _intelligence)).We use the term Smart Buddy but other names are also commonly used such as smart assistant, intelligent

III PROBLEM STATEMENT

There were so much problems which have to overcome in this paper with the help of this device like Human receptionist has to sit for very long hours on a particular reception counter. Organizations need to hire multiple receptionist employees to work on different shift-timings. Training cost as well as time consumption per new employee increases.

IV PROPOSED SOLUTION

The all queries of problem statement are overcome in this proposed solution by providing the features like ML based receptionist device which can handle visitor's query in text, audio and video format, The proposed solution can perform all the redundant tasks of a receptionist with zero or near to zero error rate. Also It can take audio input from visitor, detect face of the visitor and share this information concerned higher authority in text format via email or SMS.

Advantages of Proposed System

- It has less cost rather than wasting money on human salary.
- It provides 24*7 assistance.
- It is possible to take the backup of all the data from Knowledge Database which was not possible with traditional register system

V SYSTEM ARCHITECTURE

The device is developed to replace the intermediate between user and office staff smartly. In the above architecture modes suggests that where the system is going to be use. The device can be use anywhere where there is need of receptionist like Hospital, Bank, and Industry. Various sensors are used in this device like temperature sensor and heat sensor for calculating the temperature and humidity of the location where it will be place. As there is no as such need of using this sensors but as the device is smart then it should be able to do all the things embedded into it. Camera and mic is also there for capturing the image and getting the voice input respectively. Image processing is used for capturing the image of end user and use it for future reference. Mic is used to communicate with the device by asking the query like we ask to human receptionist. All these processing is done with the help of Machine Learning. Voice data is transferred to text then processing is done on that data and finally the

output is send in the form of audio to the user. All the data which is generated by input and processed output is stored in a Database and only necessary data among the bulk of data is sent to office staff my means of Gmail, call or text.

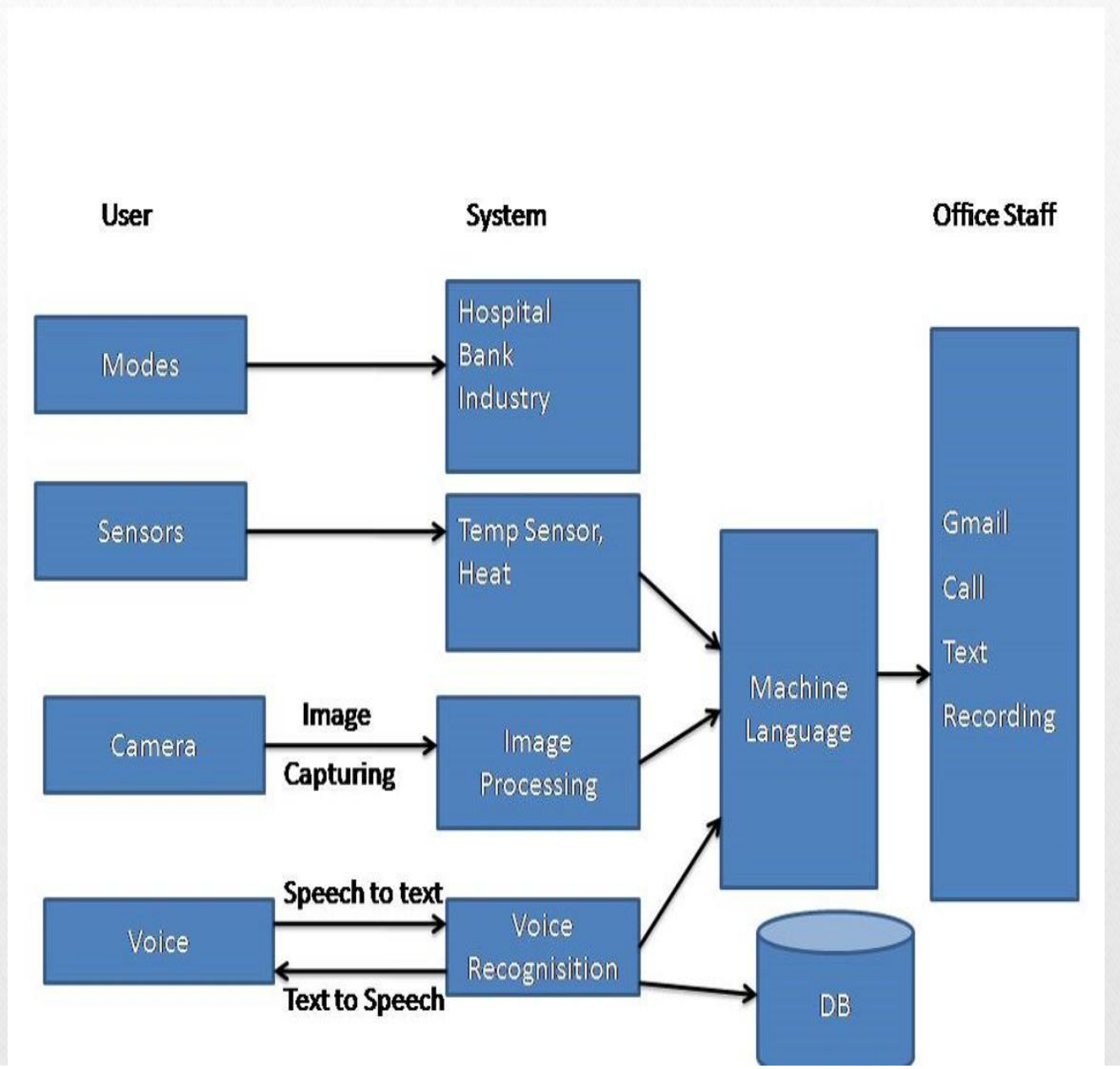

Figure 1 System Architecture

VI CONCLUSION

Hence in this way we have developed a device which helps people in doing the same work in smart way Also we have reduced the drawbacks of traditional system and developed a new system which is nearly less error prone and near to zero error rate with highly efficient manner.

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