## Voice Controlled Intelligent Video Frame Response System

1. Technology: (Max 350 words & ADD ONE IMAGE if necessary)

The proposed invention teaches a method and system for controlling the video frames based on voice signals. The invention discusses features such as continuous playing of the video while processing the user queries using a human agent. No prior art teaches the said features. The proposed invention enables the user to have a face-to-face interaction with a video agent. The proposed system can assist the users/customers on providing information, guiding to operate a machine or a device, or training to achieve any skills like communication skill, etc. The human agent providing assistance to the user is created though a pre-recorded video. The pre-recorded video file contains the required information to answer the user queries which are well separated in the video file. When the user asks a question, the corresponding portion in the video will be played. Though the video is pre-recorded, the proposed technology enables it to interact and respond like a human agent with the user on a real-time basis. The proposed system receives the audio signals from the user and then processes it to extract the required information the user is seeking. The most import aspect of the invention is that while the user is speaking to the computer agent, the system displays that the human agent in the video is listening it which is also a pre-recorded one.
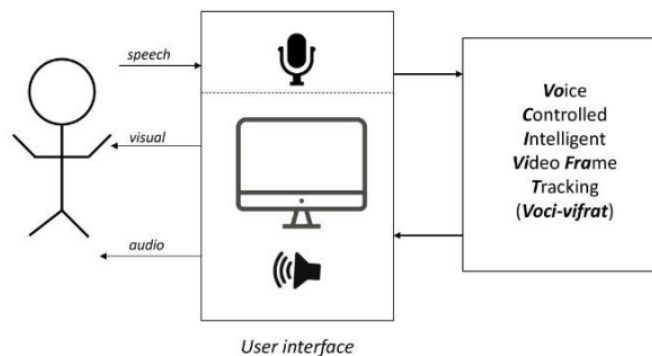
Fig, 1 The basic structure of the proposed invention

2. Problem Addressed: (Max 150 words)

Chatbot technologies have become an integral part of organizations while doing businesses online and offline. When the number of customers has been increasing day by day to an organization, providing better services, and understanding their concerns has become a challenging task. Customers always want their problem to be addressed by a human who is knowledgeable and authorized. To guide customers about various services and processes, organizations require a human like interaction than a

chatbot which understand the concern of the customer in a mechanical fashion. Most of the existing chatbots including audio chatbots require huge computational resources as well as managed by experts. This limits the use of chatbot technologies to a limited organization. To address this problem, a novel cost-effective video chatbot system which works based on video frame tracking system has been proposed. The proposed system utilizes the video file into a knowledge providing system based on the user queries. The proposed system requires less computational resources and it can be operated by anyone without having any technology experience.

3. Industrial Applications:

The proposed technology has wide range of applications. Two of the industry applications are listed below.

- **Customer support:** Assume that a proposed system is installed in a bank at the entrance or near the entrance. When a customer approaches the system with a query that how to enable international payment in his bank account, the proposed system listens the query and the video response tracking system is moved to the location where the information stored in the video. Frequently asked questions or information related to the domain can be recorded in a single video file. When the user approach the system with his query, the interactive video system will fetch the relevant information in the video and frame tracker is directed to that portion for response.

- **Video learning and doubt clearance:** E-learning has become an integral part of educational system. However, the doubt clearance or fetching the required information from a video file is still a challenging task. The proposed system can be used to clarify the doubts that a student can have while studying a topic, this can be achieved through recording a video file which contains all the doubts the student can have by recording the responses in video file. The proposed system can monitor and track the queries and responses in an easy way.

4. Patent Application Number: 202441011688