Chatbot for Government Examination using AI

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Abstract: A chatbot is a computer program which controls a conversation through voice or textual methods. These programs are often structured to firmly copy how a human would behave like a conversational partner and thus passing the Turing test. Chatbots are typically used in dialogue systems for different practical purposes including customer service and information acquisition. Few chatbots use complex natural language processing systems. Many simpler chatbot scan for keywords within the input and then fetch a reply with the most matching keywords from a database. Chatbots are also known as smartbot, talkbot, chatterbot, Bot, IM bot, interactive agent, conversational interface, conversational AI, or artificial conversational entity. The objective of the research is to investigate the feasibility of using chatbot technologies to simulate government exams and jobs on the internet. Most of the students want to try government jobs but they don't know about the jobs and about the exams which are held for the particular government job. Normally the students may search details about it in some of the famous websites. They need to go through the entire website and search for the details. This process is time consuming and also not interesting. In this android application students can ask their query to the chatbot. Students can easily get the answers from the chatbot regarding the government exams and jobs. This is not only helpful for all students or a person who is searching job in the government sector but also interesting due to its conversational interface.

Keywords: Android, Artificial intelligence, Speech recognition, internet, chatbot, government exams.

I.   INTRODUCTION

A Chatbot (also known as a Talbot, chatterbox, Bot, IM bot, interactive agent, or Artificial Conversational Entity) is a computer program or an artificial intelligence which conducts a conversation via auditory or textual methods. Such programs are often designed to convincingly simulate how a human would behave as a conversational partner, thereby passing the Turing test. Chatbot's are typically used in dialog systems for various practical purposes including customer service or information acquisition. The goal of the project is to investigate the feasibility of using Chatbot technologies to simulate government exams and jobs on the internet. Most of the students want to try government jobs but they don't know about the jobs and about the exams which are held for the particular government job. In this android application students can ask their query to the Chatbot. So student can easily get the answers from the Chatbot regarding the government exams and jobs. This is the helpful for all students or a person who are searching jobs in the government sector.

II.   METHODOLOGY

Our proposed system is an android application. The registered user can ask their queries and questions related to government Exams. This chatbot takes the question as an input and provides it to the server. The questions or queries can be pertaining to any government exams like date of the exams, fee structure, syllabus of the exams, payment options, enquiry about results and some Frequently Asks Questions (FAQs). Processing of the questions is done and server sends an appropriate output for the questions. Users can view answers to their respective questions. This is done by using chatbot.

In the architecture, user registered and login into the system by using PHP database. After login into the application user can ask query in voice (audio) and in text format related to the government exams- such as syllabus of particular exams, exam dates and registration process with the intended fee structure-using android application. API.AI is do the interaction between human and computer which is based on natural language conversations. Also API.AI services used for speech recognition, natural language processing, and conversation management to quickly and easily differentiate their business, increase customer satisfaction and improve business processes. Intent gives the brief description of what operation should be perform. It also used to retrieve, create, update and delete the intent object. An intent filter specifies the types of intents to which an

activity, service, or broadcast receiver can respond to by declaring the capabilities of a component. Then dialogflow API will compare the user query to the database and by pattern matching give the appropriate answer for the user query. At the end all the conversation will be mailed to user by system using static PHP and HTML for the proper alignment and also send the real time notification for upcoming events by admin using php.
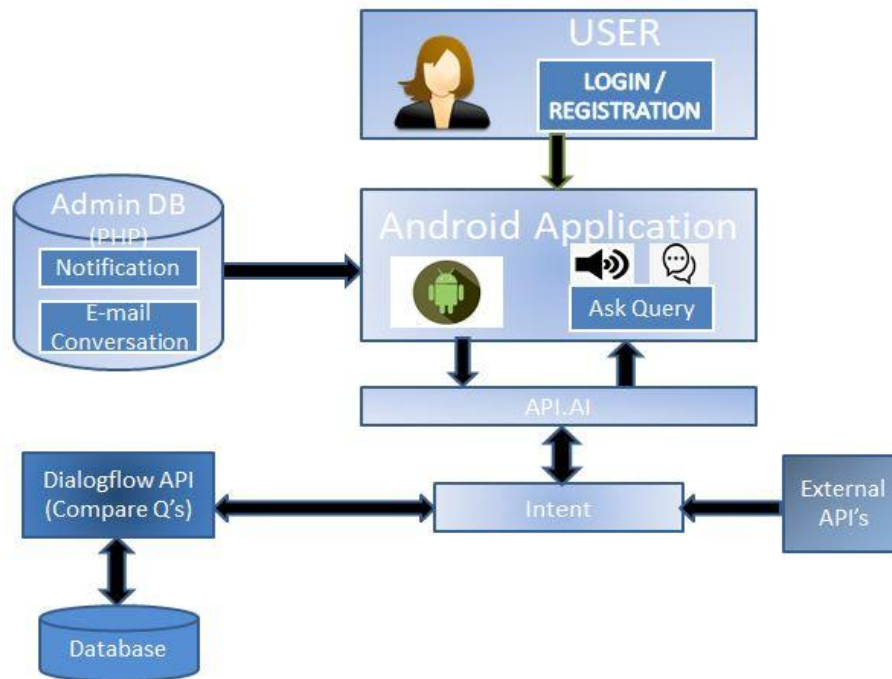

Figure 1: Architecture of System

1. Voice Input: In this step an input file which needs to be summarized is given to the system. The file may either be in .wav or .mp3 format.

2. Speech Recognition and Transformation: Here the input file is then processed and speech is recognized. If an .mp3 file is uploaded then it will be converted into .wav format which is further used for converting this audio file into text.

3. Convert into Text: The audio file is then converted into a text file on which further processing will be done. This text file will be used to form tokens, word embedding, etc.

4. Summarize Text Using Neural Network: In this step the processing of data is done. The text that is obtained after conversion is further processed. Where processing of the questions is done and server sends an appropriate output for those questions to the android application.

5. Output in User Requested format: The summary thus obtained is then displayed to the user. The user can obtain the summary either in text format or audio format. The output is thus displayed as requested by the user.

III.   PERFORMANCE EVALUATION
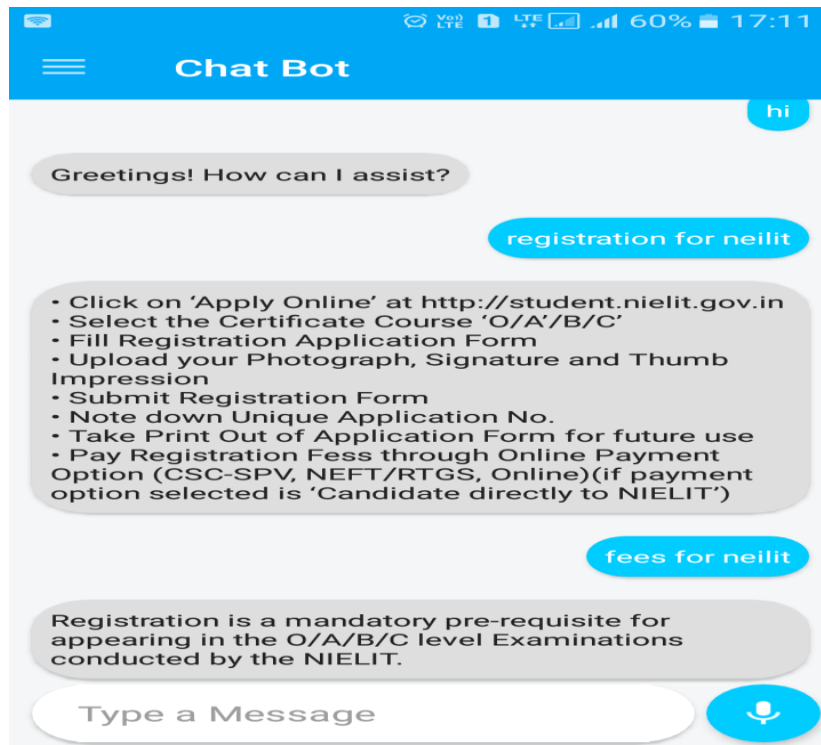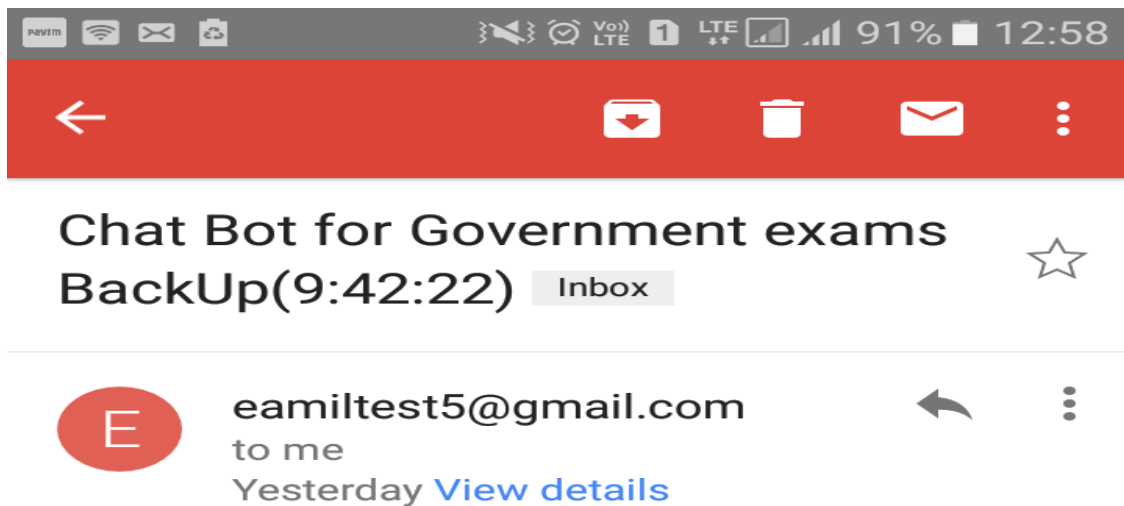

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Figure 2 : Main Page

This is the Main page where user can ask query. Here you can see the chat screen. The purpose of providing this is to make it interesting for the students and easily acquire the required details. It saves time and effort. Also the chatbot provides the automated reply very fast. All at one place.

Figure 3 : Logout Page

This is the logout page.
Logout informs the chatbot that the current user wishes to end the login session. In this page user can view and edit profile using the View/Edit Profile option. The details can be updated as per the user's needs at anytime.

Figure 4: Backup Page

This is the backup page where users will get there chat as a backup for future reference. It saves their time and it get easier to again access the chat and also it does not affect the physical storage of your device.

IV. CONCLUSION

Thus, we can conclude that the android application (chatbot) will help us to give all the information about government jobs and answers all the FAQ's related to the government jobs. This application also reduces the time taken to manually search on internet. It helps in obtaining the real time notification about all the government exams and other updates related to them.

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