

“Smart Bot with Speech Recognition”

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Abstract: The growth of technologies like Artificial Intelligence (AI), Big Data & Internet of Effects (IoT), etc. has marked numerous advancements in the technological world since the last decade. These technologies have a wide range of operations. One similar operation is “Chatterbot or “Chatbot”. This technology is a combination of AI & Natural Language Processing (NLP). Chatbots have been a part of technological advancement as it eliminates the need of mortal & automates boring tasks. Chatbots are used in colorful disciplines like education, healthcare, business, etc. In the study accepted, we reviewed several papers & banded types of chatbots, their advantages & disadvantages. The review suggested that chatbots can be used everywhere because of its delicacy, lack of responsibility on mortal coffers & 24x7 availability.

Keywords: Python, Speech Recognition, Pyttsx3, Numpy

I. INTRODUCTION

Artificial intelligence (A.I.) has grown in fashionability for bluffing exchanges between bots and humans, particularly on mobile platforms. The functionality of these chatbots ranges from utilitarian to entertainment, but the value is frequently not easily defined. The purpose and need for these chatbots are frequently not easily defined. Curiosity and interest may spark an original commerce with a chatbot, but to add further value to ongoing relations we should identify a astronomically respectable part that has a defined purpose. What a chatbot is, and how to use one effectively, are new generalities that numerous struggle to define.

The convenience could be bettered if the system is not only text predicated but also voice- predicated & voice trained. This is the problem addressed by this paper. A discussion is an assimilation of information where one creates differences and parallels during the duration of a discussion. Depending on the position of intelligence the experience would be enjoyable and a true emulation of a virtual reality. The grade of intelligence is not the number of correct and incorrect statements but the capability to learn and add to its knowledge base. To produce a farther user accessible discourse system; a simpler input system using voice is introduced; creating and feeding for a further particular and accessible experience

II. LITERATURE SURVEY

This assignment is mainly centered at schools and consequently the synchronization of all of the sparse and diverse statistics concerning the everyday university schedules. Generally, college students face troubles in getting accurate notifications on the right time, every so often critical notices like campus interviews, education and site events, holidays, and unique announcements. Smart Campus attempts to bridge this hole among college students, instructors, and university administrators. Therefore in a really real-international scenario, like a college campus, the facts inside the kind of notices, and auditory communication, are frequently at once communicated via the android gadgets and can be made to be had for the scholars, and instructors at once on their android gadgets and consequently the renovation of software are less difficult in later destiny way to the employment of architectural MVC which separates the maximum critical works inside the improvement of an software like facts management, cell software show and internet carrier which may be the controller to shape certain for immediate and green renovation of the applying. 1) Smart Answering Chatbot supported OCR and Over producing Transformations and Ranking S. Jayalakshmi, Dr. Ananthi Sheshasaayee 978-1-5090-5960-7/17 2017 IEEE 2017 an automated answering Chatbot device to answer to User's query the use of textual content article from the virtual report file. 2) Artificial Intelligence Technologies for Personnel Learning Management Systems Nayden Nenkov, Yuriy Dyachenko IEEE eighth International Conference on Intelligent Systems 2016 These marketers in the type of chatbots want to automate the interplay among the pupil and additionally the trainer in the frames of Moodle learning control device. 3) Chatbot using a Knowledge in Database Human-to-Machine Conversation Modeling Bayu Setiaji, Ferry Wahyu Wibowo 2166-0670/sixteen 2016 IEEE 2016 The system has been embedded information to identify the sentences and makes a desire itself as a reaction to reply a matter. 4) Towards a green voice-primarily based totally chatbot J. Quintero Student Member IEEE, and R. Asprilla, Member, IEEE 2015 IEEE THIRTY FIFTH CENTRAL AMERICAN AND PANAMA CONVENTION 2015 the occasion and integration of technology hired in an experimental herbal verbal exchange device designed to run on a humanoid robot. 5) Schantz, Herbert F, The records of OCR, optical man or woman recognition, Recognition Technologies Users Association, Manchester Center, VT, 1982. 6) AI BASED CHATBOT Prof.



Nikita Hatwar¹, Ashwini Patil², Diksha Gondane³ 123 (Information Technology, Priyadarshini College of Engineering, Nagpur/ RTMNU, India) International Journal of Emerging Trends in Engineering and Basic Sciences (IJEEBS) ISSN (Online) 2349-6967 Volume 3, Issue 2 (March-April 2016). 7) S. Jayalakshmi and Dr. Ananthi Sheshasaayee Automated Question Answering System Using Ontology and player position International Conference on Innovative Mechanisms for Industry Applications (ICIMIA 2017).

III. BACKGROUND

A. Human-Computer Speech commerce

Speech recognition is one of the most natural and sought after ways in computer and networked device commerce has only lately come possible (last two decades) with the arrival of fast computing. Speech is a sophisticated signal and happens at different situations “semantic, verbal, articulatory, and aural” (3). Speech is considered as the most natural among the aspects of mortal communication, owing to riotous information implicitly being beyond the meaning of the spoken words. One of the speech information birth stages is converting speech to text via Automatic Speech Recognition (ASR) and mining speech information (4); also, the performing textbook can be treated to prize the meaning of the words. Speech recognition is extensively accepted as the future of commerce with computers and mobile operations; there's no need to use traditional input bias similar as the mouse, keyboard or touch sensitive screen and is especially useful for druggies who don't have the capability to use these traditional bias (5). It can help impaired people with palsy, for illustration, to interact with ultramodern bias fluently by voice only without moving their hands.

B. Natural Language Toolkit (NLTK)

In order to deal with manipulate the textbook performing from speech recognition and speech to textbook conversion, specific toolkits are demanded to organise the textbook into rulings also resolve them into words, to grease semantic and meaning birth. One of these toolkits is the extensively used NLTK which is a free plugin for Python. The Natural Language Toolkit (NLTK) is a set of modules, tutorials and exercises which are open source and cover Natural Language Processing symbolically and statistically. NLTK was developed at the University of Pennsylvania in 2001 allowing computational linguistics with three educational operations in mind systems, assignments and demonstrations (6) (7). It can be plant within the Python Libraries for Graph manipulation GPL open license. NLTK is used to resolve words in a string of textbook and separate the textbook into corridor of speech by tagging word markers according to their positions and functions in the judgment.

C. Chatbot Fundamental Design Ways and approaches To design any Chatbot, the developer must be familiar with a number of ways.

- 1) Parsing this fashion includes analysing the input textbook and manipulating it by using a number of NLP functions; for illustration, trees in Python NLTK.
- 2) Pattern matching it's the fashion that's used in utmost Chatbots and it's relatively common in question- answer systems depending on matching types, similar as natural language enquiries, simple statements, or semantic meaning of enquiries (12).
- 3) AIML it's one of the core ways that are used in common Chatbot design. Further details about this fashion and the language used are explained in section 2.5 below.
- 4) Converse Script is the fashion that helps when no matches do in AIML. It concentrates on the stylish syntax to make a sensible dereliction answer. It gives a set of functionalities similar as variable generalities, data, and logical and/ or.
- 5) SQL and relational database is a fashion used lately in Chatbot design in order to make the Chatbot remember former exchanges. Further details and explanation are handed in section 2.6 below.
- 6) Markov Chain is used in Chatbots to make responses that are more applicable probabilistically and, accordingly, are more correct. The idea of Markov Chains is that there's a fixed probability of circumstances for each letter or word in the same textual data set (13).
- 7) Language tricks these are rulings, expressions, or indeed paragraphs available in Chatbots in order to add variety to the knowledge base and make it more satisfying. The types of language tricks are

- Canned responses.
- Typing errors and simulating key strokes.
- Model of personal history.
- Non Sequitur (not a logical conclusion)

IV. OBJECTIVE AND SCOPE

Continuing with the problem delivered in the preceding segment that chatbots are nonetheless now no longer usually carried out in training, the goal of this thesis is prepared in context. To in addition the occasion of tutorial chatbots, it is critical to search out what has been completed and to summarize this facts in a totally concise and applicable manner. No such summarizing look at became found, thus, this look at aimed to offer that precis to are seeking out what pedagogical makes use of and competencies a chatbot has in an educational context through reviewing the literature in the field, this shows watching at what the chatbot can do and be used for in an educational context. in the course of this circumstance, it is also applicable to peer if the chatbot can be beneficial on its personal or if extra generation is required, like every device the chatbot has to be encompassed in or that complements its competencies, e.g. e-studying device or text-to-speech generation. Hence, the add this look at can be used as a stepping stone for coming researchers who would possibly greater correctly discover the in addition capacity of the generation. This aim became evolved with the essential interest of instructors and researchers as they persevered to broaden chatbot generation. Of course, there may be additionally pretty one issue that is critical, for instance, which sort of chatbot to use, the manner to evolve it nicely to a course, what pretty structure the chatbot device would possibly need, and the manner to reap the excellent pedagogical fee after which on. But the query of what position a chatbot should take and what can it neutralize the context of training appeared greater acutely applicable when you consider that its solution can be a very good vicinity to start answering different questions.

Objective:

- To lessen the time required to clear up questions.
- To offer consumer comments primarily based totally on questions.
- Facilitate verbal exchange among consumer and machine.

Scope:

Save timing of students and instructors and additionally store greater manpower. Students can see all files associated with university like notice, look at material, query papers, etc. now and again and from everywhere whether or not the pupil is gift in university or now no longer. And additionally lessen the paintings of group of workers. it is right verbal exchange among group of workers and students.

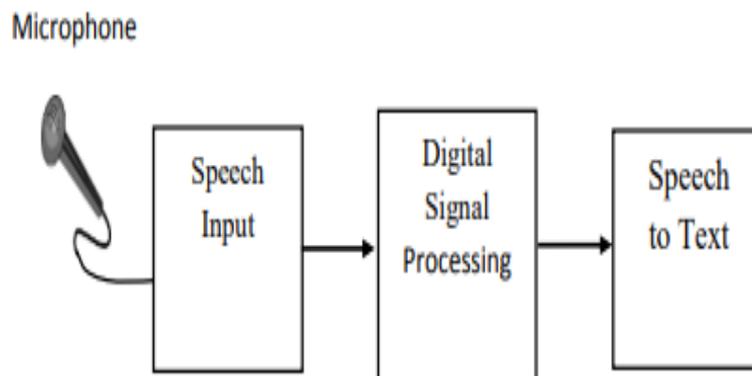


Fig. 2. The stage of speech recognition and converting to text

V. CONCLUSION

Inthis paper a noteworthy benefactions of ways which lead to development ofchatbotswwhich have now changed the everyday lives of mortal have been covered through named set of papers which bandy the strategies and procedures and also the measures thatare taken underthe considerationSomeofthe enhancement and advancements made onthe formerly developed chatbot systems have also been noted and surveyed throughthis paper from colorful reference papers andnews composition bringing intothe light thebehind ways involved for making the same.The systems ofChatbot configuration areas yet an issue for badinage andno regular approach has yet been honored. Judges have so far worked in disentangled situations with a hesitance to expose any enhanced procedures they've plant, therefore, backing offthe upgrades toChatbots. General- purpose Chatbots need advancements by designing further comprehensive knowledge bases.Every specialistneedsto forcefully library any fruitful advancements to permit the mortalPC converse collaboration to concurrence toa common approach.Thiswill dependably be inconsistent with business contemplations.

**VI. REFERENCES**

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