Artificial Intelligence-Based Vociferation Chatbot for Emergency Health Assistant

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Abstract

It has brought up to clarity that Artificial Intelligence has become very vast in every tech place. The human interface as telecommunication becomes effortless with AI technology. The AI pays the hands for the growth of many challenging ideas like automation, and brain-computer interfaces. As machine learning becomes the subset of artificial intelligence the training part is made unchallenging for computer application. We made this a great tool for our project with the links of Application Programming Interface along with vociferation technology in a personalized chatbot. We made this to bring out a supportive application for medical areas. To make the emergency to be tranquil, we ensure that our programs embedded in the chatbot will be effective for the user with vociferation technology. We also feel that every new outcome as a product of the enriching technologies process improves the betterment of every individual user and ensures that life becomes easily accessible. The upcoming technology proves that it is better than existing ones in one or the other way comparatively. They don't let mankind have the workloads as they allow the users to be controlled in a precise manner all the time. The real-time interface with the technology and the user becomes more user-friendly with the fast-growing designing era. This makes plenty of unchallenging works possible. The technology that is growing up to date ensures the activity of humanity is becoming manifest in this trendsetting society. The curiosity of the upcoming process or the gadgets raises high among the users and also the technologies to keep satisfying all the user's needs in everyday application.

AI Vociferation for Emergency Healthcare Assistance

Proposed System
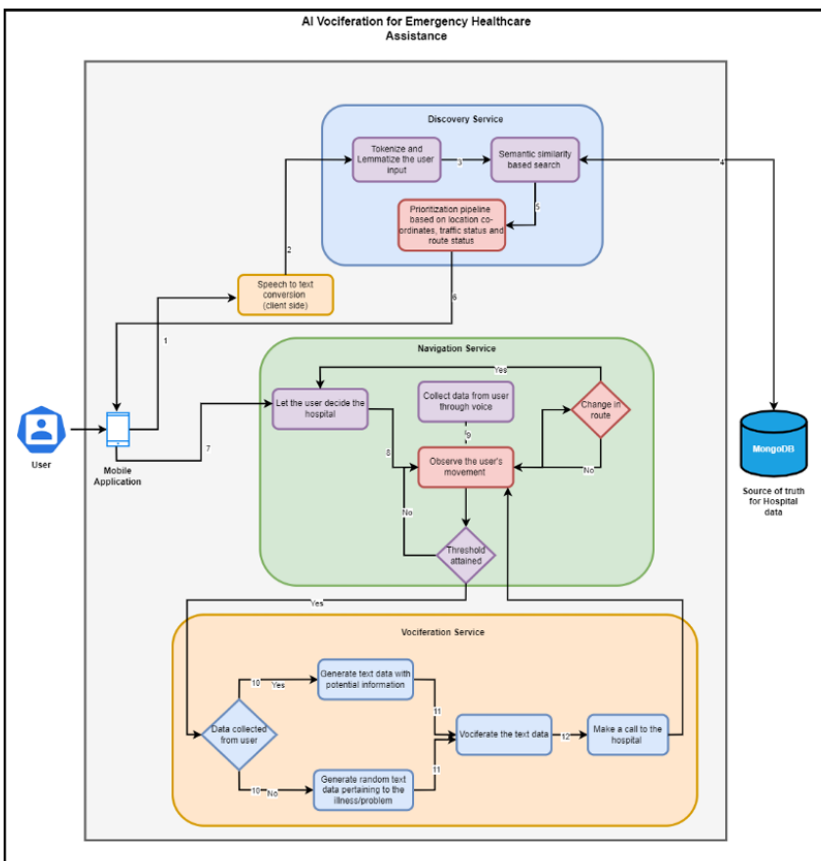
The lifecycle of the system starts with the Initiation of the system through voice. The system can be initiated by a keyword "May Day" which opens the mobile application assistant which spins up the voice recorder to fetch input from the user. The user must speak out about the emergency (say a "snake bite"). The mobile application converts the speech into text on the client-side and then sends the text form to the backend Discovery Service through a REST call.

The text received in the discovery service undergoes stemming and lemmatization and then passed on to the Semantic Similarity model Glove which is an unsupervised machine learning algorithm that carries out semantic similarity by transforming the words to vectors.

The data from the discovery service is presented to the user with the help of Google Maps API, where the user can select the hospital to get directions to it. The system will continuously monitor the user's movement and look for any direction change. If a direction change is detected the system confirms the direction change with the user by an interactive voice-based dialog flow, if the user needs to switch to a different hospital, the system redirects the route to that.

Our application programming brings out the best UI/UX to make sure that never compromises the interaction with the user. It also ensures that the app interface is accessible by any user with the vociferation settings with allowed system settings modification usage.

The vociferation service is used to generate human voices and make an outbound phone call to the hospital. The system checks whether any data has been provided by the patient, if there is data the system automatically generates text passage through neural text generation using Kera's and Conditional Language Models. If the user has not given any data, the system uses predefined generated data.

Background

The proposed [1] idea focuses on building an interactive chatbot based on NLP to help the users understand the first aid techniques in times of an emergency. The primary aim of the system is to provide first aid techniques to the user (he may/may not be the victim). The user can follow the procedures if he is a victim, and the user can help the victim if he is not one. The system also proposes an alert system based on social media API. The response time of this technique is huge and may not be ideal in all cases. The system is not feasible in case of high emergencies. No one prefers to chat with a bot in times of emergency. The system [2] proposes a chatbot model that user can user (patient) can use to diagnose the illness based on the symptoms extracted from the user's input. Then the system recommends a list of doctors and their location treating the diagnosed illness. The user can then contact the doctor to book an appointment. The system is a typical chatbot model which is in no way suitable for emergencies. No one prefers to chat with a bot in times of emergency.

Conclusion

The AI-based vociferation chatbot is bringing this modern world a modern way to handle problems and situations that happen in day-to-day life with intellectual ways and advanced features. This is a revolution of emergency assistants which is yet to come shortly. As referred to from the other paper works and ideas in the past years, this idea of using the AI with chatbot gives better experience and solutions. This also brings trust to the users that using this chatbot could bring them the required help on time. This is like a life-saving medicine and helps the user at the exact time of requirement. As the chatbot is AI-based it works faster and smarter than the existing assistants. This chatbot brings out the health care system very much feasible to the users especially at all the emergency scenarios to make every situation uncomplicated with our software application which also brings out the helping hand of the AI tool. And make sure to bring out the originality inside the software.

Publication

References

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