

ONLINE PHYSICIAN DISCUSSION IN CAPITAL HEALTHCARE CENTRES USING MACHINE LEARNING TECHNIQUES

^[1] N. Deepa

^[1] Assistant Professor, Department: Master Of Computer Applications, Hindusthan College Of Engineering And Technology-Coimbatore.

Abstract : reduce the healthcare costs and improve accessibility to medical knowledge the medical chatbot is built. Certain chatbots acts as a medical reference book, which helps the patient know more about their disease and helps to improve their health. The user can achieve the real benefit of a chatbot only when it can diagnose all kind of disease and provide necessary information.: To lead a good life healthcare is very much important. But it is very difficult to obtain the consultation with the doctor in case of any health issues. The proposed idea is to create a medical chatbot using Artificial Intelligence that can diagnose the disease and provide basic details about the disease before consulting a doctor.

To

Key Words: Artificial Intelligence, Artificial Conversational Entity, Symptoms, Synthesizer, Language processing, Information, Visually impaired people

1. INTRODUCTION

Artificial Intelligence is based on how any device perceives its Environment and takes actions based on the perceived data to achieve the result successfully. It is the study of intelligent agents. The term "artificial intelligence" is applied when a machine mimics "cognitive" functions that humans associate with other human minds, such as "learning" and "problem solving. Artificial Intelligence gives the supreme power to mimic the human way of thinking and behaving to a computer. A chatbot (also known as a talkbot, chatterbot, Bot, IMbot, interactive agent, or ArtificialConversationalEntity) is a computer program which conducts a conversation via auditory or textual methods.

These programs are designed to provide a clone of how a human will chat and thereby it acts as a conversational partner rather than humans. For various practical purposes like customer service or information acquisition, chatbot is being used in the dialog system.

Text to speech technology is the process wherein the computer is made to speak. It uses the concepts of natural language processing. In Text reading applications, there are many different techniques available such as label reading, voice stick, brick pi reader and pen aiding but these methods can perform text to speech by creating datasets. In order to address this problem, finger reading technique has been developed, it eliminates the datasets created and stored previously and provide a previous response of reading any text given as input captured image. The speech synthesizer converts the audio input into the text form and processes the text to further learning modules

LITERATURE SURVEY

Language processing depends on a left-lateralized network of frontotemporal cortical regions. This network is remarkably consistent across individuals and cultures. However, there is also evidence that developmental factors, such as delayed exposure to language, can modify this network. Recently, it has been found that, in congenitally blind individuals, the typical frontotemporal language network expands to include parts of "visual" cortices. Here, we report that blindness is also associated with reduced left lateralization in frontotemporal language areas. We analysed fMRI data from two samples of congenitally blind adults (n = 19 and n = 13) and one sample of congenitally blind children (n = 20). Laterality indices were computed for sentence comprehension relative to three different control conditions: solving math equations (Experiment 1), a memory task with nonwords (Experiment 2), and a "does this come next?" task with music (Experiment 3). Across experiments and participant samples, the frontotemporal language network was less left-lateralized in congenitally blind than in sighted individuals.

MATERIALS:**Audience**

This tutorial has been prepared for those who want to learn about the basics and various functions of NumPy. It is specifically useful for algorithm developers. After completing this tutorial, you will find yourself at a moderate level of expertise from where you can take yourself to higher levels of expertise.

Prerequisites

You should have a basic understanding of computer programming terminologies. A basic understanding of Python and any of the programming languages is a plus. NumPy is a Python package. It stands for 'Numerical Python'. It is a library consisting of multidimensional array objects and a collection of routines for processing of array.

Operations using NumPy

Using NumPy, a developer can perform the following operations –Mathematical and logical operations on arrays.

Fourier transforms and routines for shape manipulation. Operations related to linear algebra. NumPy has in-built functions for linear algebra and random number generation.

METHOD:**EXISTING SYSTEM**

Under manual Online Doctor System, you have to first wait in line to take appointment for the doctors and wait for your time to have meet with them and discuss on your health problems. As you have to provide your information and other reports many times at different places such as the medicine store which is again a burden of carrying documents. You have to be present physically at the doctor's cabin. Patients have to visit on another day of after some hours to take their health reports which involves extra care person with patients anytime. Under manual system, the only accepted payment method is by cash and if patients due to some reasons are not having cash on time may face difficulties and not able to get treatment.

PROPOSED SYSTEM

To make a truly Online Doctor System to have meet with online doctors, all manual process has been automated through this system. Patient have to fill online form by which id and password created and send to their email and upon accepting data, automatic login to patient panel. Through this panel, patients can select the disease and have prescription with them on their time from their own place. Patients will get all their reports and medicine prescriptions in their inbox by notification indication just after appointment session. There is no need of cash and a secure payment gateway has been used to pay the required fees using their account or debit or credit card.

DISCUSSION:**Unix**

IDLE is the very first Unix IDE for Python.

Integrated Development Environment

You can run Python from a Graphical User Interface (GUI) environment as well, if you have a GUI application on your system that supports Python.

Extendable

You can add low-level modules to the Python interpreter. These modules enable programmers to add to or customize their tools to be more efficient.

Databases

Python provides interfaces to all major commercial databases.

GUI Programming

Python supports GUI applications that can be created and ported to many system calls, libraries and windows systems, such as Windows MFC, Macintosh, and the X Window system of Unix.

PANDA

pandas is an open-source, BSD-licensed Python library providing high-performance, easy-to-use data structures and data analysis tools for the Python programming language. Python with Pandas is used in a wide range of fields including academic and commercial domains including finance, economics, Statistics, analytics, etc. In this tutorial, we will learn the various features of Python Pandas and how to use them in practice.

PYTHON SOFTWARE

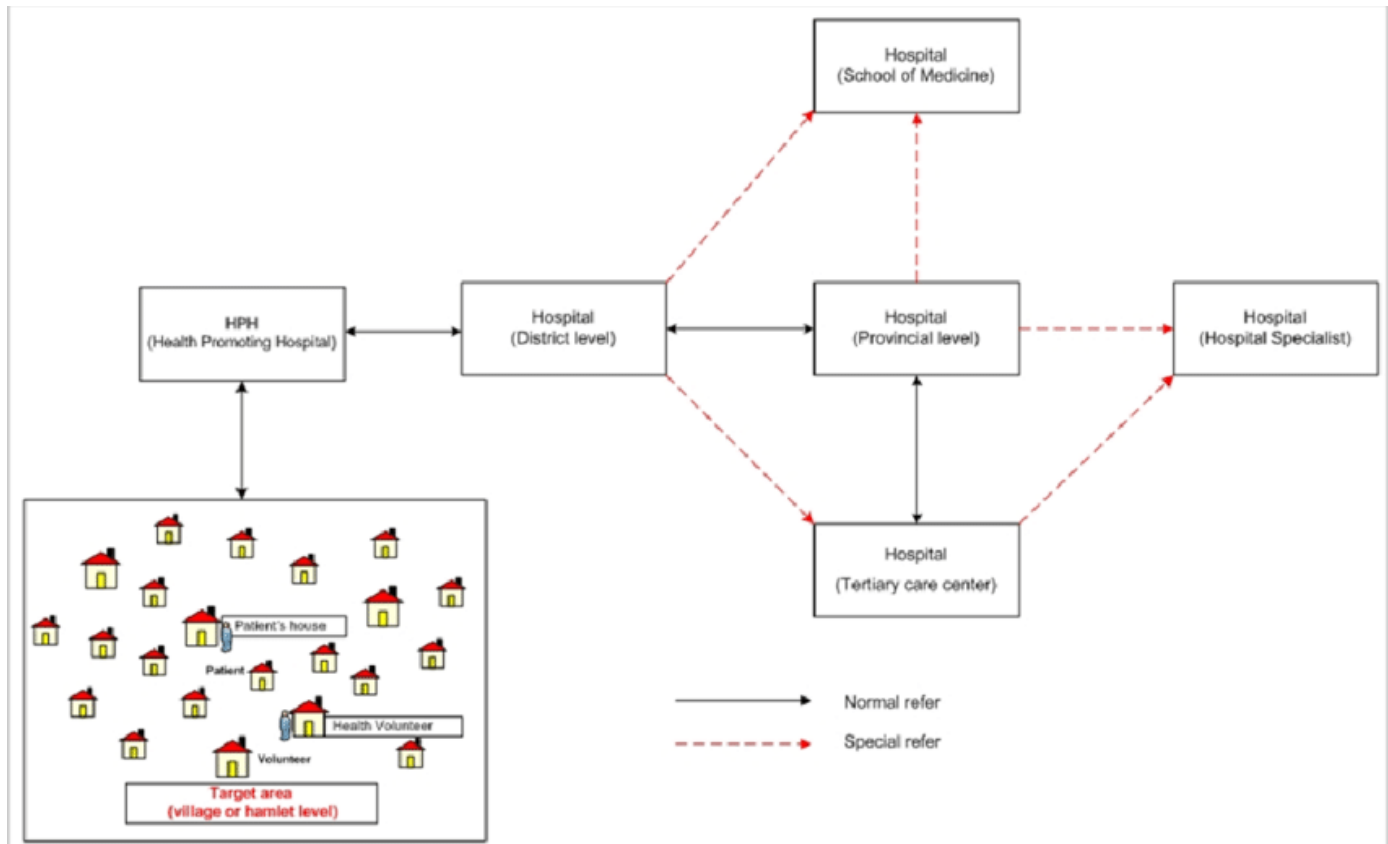
Python is a high-level, interpreted, interactive and object-oriented scripting language. Python is designed to be highly readable. It uses English keywords frequently where as other languages use punctuation, and it has fewer syntactical constructions than other languages. Python is Interpreted – Python is processed at runtime by the interpreter. You do not need to compile your program before executing it. This is similar to PERL and PHP.

FEASIBILITY STUDY

The feasibility of the project is analyzed in this phase and health care proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the hospital management. For feasibility analysis, some understanding of the major requirements for the system is essential.

ANALYSIS:

The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His level of confidence must be raised so that he is also able to make some constructive criticism, which is welcomed, as he is the final user of the system. The best way to enable NumPy is to use an installable binary package specific to your operating system. These binaries contain full SciPy stack (inclusive of NumPy, SciPy, matplotlib, IPython, SymPy and nose packages along with core Python).



1 shows the block diagram

Prior to Pandas, Python was majorly used for data munging and preparation. It had very little contribution towards data analysis. Pandas solved this problem. Using Pandas, we can accomplish five typical steps in the processing and analysis of data, regardless of the origin of data — load, prepare, manipulate, model, and analyze.

FINDINGS:

Functional testing is centered on the following items:

- Valid Input : identified classes of valid input must be accepted.
- Invalid Input : identified classes of invalid input must be rejected.
- Functions : identified functions must be exercised.
- Output : identified classes of application outputs must be exercised.
- Systems/Procedures : interfacing systems or procedures must be invoked.

PROJECT FEATURES

1. Low cost.
2. High speed networking.
3. Low power consumption.
4. Light weight network
5. Broadcast communication

RESULT:

Text to speech technology is the process wherein the computer is made to speak. It uses the concepts of natural language processing. In Text reading applications, there are many different techniques available such as label reading, voice stick, brick pi reader and pen aiding but these methods can perform text to speech by creating datasets. In order to address this problem, finger reading technique has been developed, it eliminates the datasets created and stored previously and provide a previous response of reading any text given as input captured image. The speech synthesizer converts the audio input into the text form and processes the text to further learning modules.

Despite the advancement of technology that allows for storing information electronically, textual information still remains the most common mode of information exchange. Virtually people who could restore normal vision with eye glasses or contact lenses are around 20% from the survey of ABF (www.abf.com) who could lead their normal lives. Apart from them 90% of world's visually impaired people who live in low, middle and even in most developed countries, cataract remains the leading cause of blindness. Accessing text documents is troublesome for visually impaired people in many scenarios, such as reading text on the go and accessing text in less-than-ideal conditions. The goal is to allow blind users to touch printed text and receive speech output in real-time. The user's finger is guided along each line via haptic and non-verbal audio cues. The development of such systems requires use of such systems requires use of two technologies that are central to these systems, namely optical character recognition for Text Information Extraction (TIE) and Text-To-Speech (TTS) to convert this text to speech.

CONCLUSION:

From the review of various journals, it is concluded that, the usage of Chatbot is user friendly and can be used by any person who knows how to type in their own language in mobile app or desktop version. A medical chatbot provides personalized diagnoses based on symptoms. In the future, the bot's symptom recognition and diagnosis performance could be greatly improved by adding support for more medical features, such as location, duration, and intensity of symptoms, and more detailed symptom description. The implementation of Personalized Medical assistant heavily relies on AI algorithms as well as the training data. At last, the

implementation of personalized medicine would successfully save many lives and create a medical awareness among the people.

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