# E-Commerce Site using Chat-Bot

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**Abstract** For Visual impaired individuals it's tough to try and do on-line looking. we have a tendency to are developing system that helps blind individuals to settle on colour of garments beside classes like material, size, patterns etc. by mistreatment Automatic speech recognition module. It translating of spoken words into text mistreatment deep learning methodology. It with success replaced Gaussian mixture speech recognition and has writing at Associate in nursing progressively larger scale. the most aim of this project is to propose an online a we have a tendency to ban internet looking application particularly for blind individuals through that they'll select no matter they need by merely speaking a sentence and to implement this we are about to integrate deep learning methodology and cluster.

**Keywords:** Voice Reorganization, TTS (Text To Speech), Gaussian Mixture

**Introduction:** Over the last few years, Chat bots have played a prominent role as human-computer interfaces. Chat bots are generally composed of three modules: the user interface, an interpreter, and a knowledge base. Liven defines Chabot as a program that attempts to simulate typed conversation, with the aim of at least temporarily fooling the human into thinking they were talking to another person. Basically, Chabot is a conversational agent that can interact with user in a given subject using the natural language. Many chat bots have been deployed on the internet for the purpose of education, customer service site, guidance, entertainment. Existing famous chat bots are ALICE, Sashimi and Clever both. These individuals square measure taking facilitate from loved one or friends to every each for his or her wants. It's a tough for blind individuals to settle on garments with completely different colours or they notice tough to on-line searching. A system is developed to help blind people who mechanically recognizing vesture 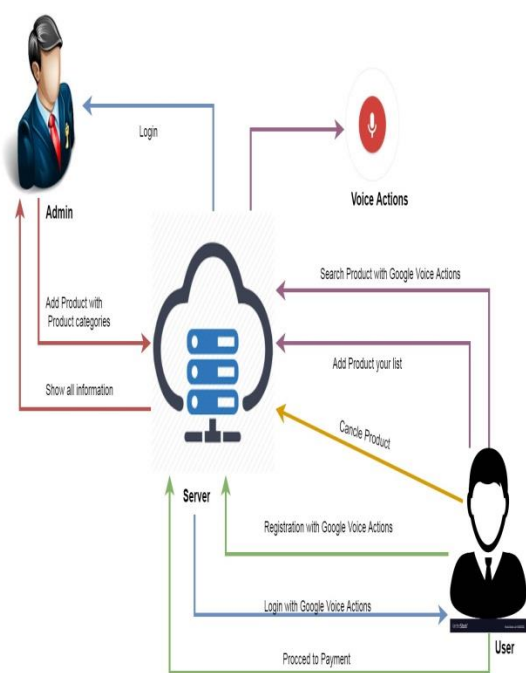patterns and colours. Camera-based clothing article of vesture wear covering consumer goods pattern recognition could be a problematic because of several clothing pattern and corresponding giant intra category variations. Existing texture analysis ways specialise in textures with variations in viewpoint and scaling. the extent of accuracy in vesture pattern recognition cannot win by texture analysis ways. Here, we have a tendency to introduce a system to help colour blind individuals to pick different totally completely different completely different vesture colours alongside different classes. The system contains 3 major components: 1) information that contain vesture pictures, a electro-acoustic transducer for speech command input 2) speech device that convert the input speech into text format 3) show of ensuing things on the screen of desktop or wearable laptop alongside speech. The system method the voice input, captured voice input is acoustic sound waves that square measure to be regenerate into the character string format for linguistics interpretation.

**Architecture Diagram:**

The proposed system is "Ecommerce based online Shopping for Visually Impaired People using Speech Recognition". The main aim of this objective based application is to enable the handicapped specially visually impaired peoples to access the ecommerce based platform which are most widely used for online purchasing of items or products now a days. But it is quite challenging task for visually impaired peoples to

use this ecommerce based framework for online shopping. Hence in order to allow handicapped peoples specially visually impaired peoples to use this ecommerce online shopping site for purchasing of products without any limitations we are developing an ecommerce based application using speech recognition to eliminates or reduces the various practical difficulties that the visually impaired peoples come across.



Mathematical Model

Formula:

$$a = \sin^2(\varphi B - \varphi A/2) + \cos \varphi A * \cos \varphi B * \sin^2(\lambda B - \lambda A/2)$$

$$c = 2 * \text{atan2}( \sqrt{a}, \sqrt{(1-a)} )$$

$$d = R \cdot c$$

Consider S is a System.

S={I,P,O}

Where

I= input,

P= Procedure

O=Output

Input

U=No of User

u=u1, u2, u3,….,u nth

D =Speech to Text

Procedure

Process 1: Admin- Admin Login with admin name and password.

Process 2: Admin- Admin adds and views all information.

Process 3: User -Registration and Login. Buy product and pay money

Output:

O=Generate the report every user with Illegal buy product.

**Algorithm:**

1. **FLITE Algorithm**

Speech synthesis is the artificial production of human voice. A computer system used for this task is called a speech synthesizer. Anyone can use this synthesizer in software or hardware products. The main aim of text-to-speech (TTS) system is to convert normal language text into speech. Synthesized speech can be produced by concatenating pieces of recorded speech that are stored in a database. TTS Systems differ in size of the stored speech units.

2. **Hidden Markov models Algorithm**

HMM are widely used in science, engineering and many other areas (speech recognition, optical character recognition, machine translation, bioinformatics, computer vision, finance and economics, and in social science)

The Hidden Markov Model (HMM) is a variant of a finite state machine having a set of hidden states, Q, an output alphabet (observations), O, transition probabilities, A, output (emission) probabilities, B, and initial state probabilities, Π. The current state is not observable. Instead, each state produces an output with a certain probability (B). Usually the states, Q, and outputs, O, are

understood, so an HMM is said to be a triple, ( A, B, Π ).

Hidden states $Q = \{ q_i \}$, $i = 1, . . . , N$.

Transition probabilities $A = \{a_{ij} = P(q_j$ at $t+1 \mid q_i$ at $t)\}$, where $P(a \mid b)$ is the conditional probability of $a$ given $b$, $t = 1, . . . , T$ is time, and $q_i$ in $Q$. Informally, $A$ is the probability that the next state is $q_j$ given that the current state is $q_i$.

Observations (symbols) $O = \{ o_k \}$, $k = 1, . . . , M$.

Emission probabilities $B = \{ b_{ik} = b_i(o_k) = P(o_k \mid q_i) \}$, where $o_k$ in $O$. Informally, $B$ is the probability that the output is $o_k$ given that the current state is $q_i$.

Initial state probabilities $\Pi = \{p_i = P(q_i$ at $t = 1)\}$.

## Literature Survey

**Paper 1.** Assistive Clothing Pattern Recognition for Visually Impaired People
**Author Name:** Xiaodong Yang ,Shuai Yuan , YingLi Tian.

**Description:** Choosing garments with complicated patterns and colours is a difficult task for visually impaired individuals. Automatic article of clothing pattern recognition is additionally a difficult analysis downside due to rotation, scaling, illumination, and particularly massive infraclass pattern variations. We've got developed a camera-based image system that acknowledges article of clothing patterns in four class's plaid, striped, pattern less, and irregular and identifies eleven articles of clothing colours. The system integrates a camera, a mike, a computer, and a Bluetooth headphone for audio description of article of clothing patterns and colours. A camera mounted upon a try of glasses is employed to capture article of clothing pictures. The article of clothing patterns and colours are described to blind users verbally. This method will be controlled by speech input through mike. to acknowledge article of clothing patterns, we propose a completely unique Run Signature descriptor and a schema to extract applied math properties from ripple sub bands to capture global options of article of clothing patterns

**Paper 2:** From Smart Objects to Social Objects: The Next Evolutionary Step of the Internet of Things
**Author Name**: L. Atzori, A. Iera, and G. Morabito
**Description:** Iris recognition verification is one amongst the foremost reliable personal identification strategies in statistics. With the fast development of iris recognition verification, variety of its applications are proposed as yet together with time group action system etc. during this paper, a wireless iris recognition attendance management system is meant and enforced exploitation Dogman's algorithmic program (Dogman, 2003). This method based mostly statistics and wireless technique solves the matter of spurious group action and the hassle of birth the corresponding network. It will create the users' attendances a lot of simply and effectively.

**Paper 3.** Review on Speech Recognition with Deep Learning Methods
**Author Name:** Rubi, Chhavi Rana**.**
**Description:** The most common mode of communication between humans is speech. As this is often this can be often the foremost most well liked manner, humans would like to use speech to act with machines together. That's why, speech recognition has gained numerous recognition. Many approaches for speech recognition exist like Dynamic Time warp (DTW), Hidden mathematician Model (HMM). The main objective of this paper is printed a three stage neural integrated model speech signal sweetening and use the decomposition integrated HMM model for speech feature transformation. For the feature extraction of speech distinct wavelength work on (DWT) has been used that provides a set of feature vectors of speech wave kind. The work has been done on MATLAB and experimental results show that system is during a position to acknowledge words at sufficiently high accuracy.

**Paper 4:** Assistive Clothing Pattern Recognition for Visually Impaired People

**Author Name:** Xiaodong Yang, Student Member, IEEE, Shuai Yuan, and YingLi Tian, Senior Member, IEEE
**Description:** Choosing garments with advanced patterns and colours is a difficult task for visually impaired folks. Automatic article of clothing pattern recognition is additionally a difficult analysis downside due to rotation, scaling, illumination, and particularly massive infraclass pattern variations. We've got developed a camera-based model system that acknowledges

article of clothing patterns in four class's plaid, striped, pattern less, and irregular and identifies eleven articles of clothing colours. The system integrates a camera, a electro-acoustic transducer, a computer, and a Bluetooth earphone for audio description of article of clothing patterns and colours. A camera mounted upon a combine of glasses is employed to capture article of clothing pictures. The article of clothing patterns and colours area unit described to blind users verbally. This method may be controlled by speech input through electro-acoustic transducer. to acknowledge article of clothing patterns, we propose a novel Radon Signature descriptor and a schema to extract applied math properties from wave sub bands to capture global options of article of clothing patterns. They're combined with native features to acknowledge advanced article of clothing patterns. To gauge the effectiveness of the planned approach, we have a tendency to use the CCNY article of clothing Pattern dataset. Our approach achieves ninety two. 55% recognition accuracy which considerably outperforms the progressive texture analysis ways on article of clothing pattern recognition. The model was additionally utilized by 10 visually impaired participants. Most thought such a system would support a lot of independence in their standard of living but they additionally created suggestions for enhancements.

**Paper 5.** Accessible Shopping Systems for Blind and Visually Impaired Individuals: Design Requirements and the State of the Art
**Author Name:** Vladimir A. Kulyukin, Aliasgar Kutiyanawala
**Description:** Independent grocery searching is one among the foremost functionally difficult tasks for visually impaired and blind people. Several helpful searching systems are developed to handle the matter of blind grocery searching. During this article, we have a tendency to establish many style necessities for helpful searching systems and analyze existing approaches to envision however well they meet them. Our objective is to shed some lightweight on potential analysis and development directions for the accessible blind searching community and to supply designers of accessible searching

), Phoenix, Arizona (2007)

solutions analysis tools which will be used as initial points of comparison.

## Conclusion:

The Assistant close Living system permits the visually impaired folks to buy problem free. It eliminates the dependence on others and therefore takes care of persons comfort. It conjointly helps them to navigate within the looking complicated and find things with none issue. It provides the power of text to speech conversion for freelance looking of person. The areas of improvement are: sensible Phone may be replaced by the other device if obtainable and therefore the data of things on top of and below the presently detected item are contend within the user's sensible phone.

## Reference

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