

Chatbot - Marketplace Support Expert System

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Introduction:

Market Support Expert System Chatbot is a smart and efficient system designed to assist you with common queries and provide accurate responses using natural language processing (NLP) techniques. Built with Python, the chatbot is a go-to resource for quickly finding answers to user's questions related to the platform.

Whether the user is curious about our return policy, needs assistance with tracking an order, or has questions about payment methods, the chatbot is here to help. It's like having a virtual assistant at your fingertips, ready to provide information and support whenever you need it.

Design Specifications

Functional Requirements

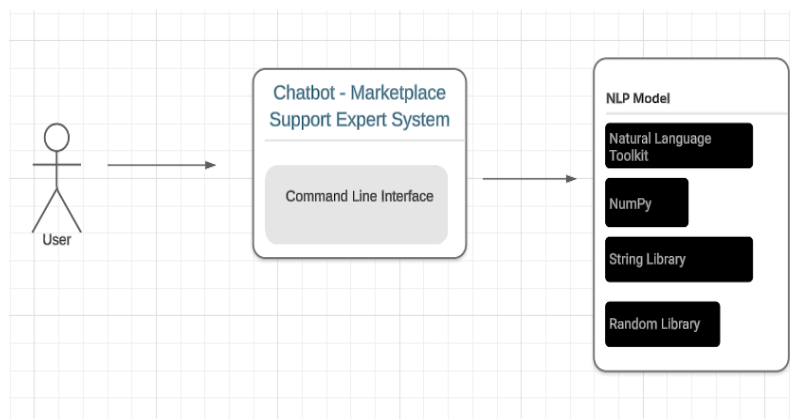
1. User shall be able to enter his response.
2. System shall generate the response according to the user question.
3. User shall be able to view the response provided by the system.

Non-Functional Requirements

1. System should be scalable
2. System should be efficient
3. System shall be able to handle multiple users at a time.

Block diagram:

Following is the block diagram of the system.



Intents:

- 1) The following are the intents I created and saved in the dictionary. It uses the keywords to generate the responses.
- 2) International shipping: Yes, we offer international shipping to select countries.
- 3) Payment methods: We accept Visa, MasterCard, and EasyPaiza.
- 4) cancel order: Orders can be canceled within 24 hours of placement.
- 5) contact customer support: You can contact customer support at customersupport@example.com or by calling +1234567890.
- 6) business hours: Our business hours are from 9:00 AM to 6:00 PM, Monday to Friday.
- 7) gift wrapping: Yes, we offer gift wrapping services for an additional fee.
- 8) warranty: Our products come with a one-year warranty for manufacturing defects.
- 9) order no: The order no you have provided is in our list
- 10) suggest: I can't suggest a product to you with the information you've provided.
- 11) product availability: Let me check the product availability in our inventory

Libraries and Tools

Natural Language Toolkit (NLTK): Used for text preprocessing and NLP functionalities.

NumPy: Utilized for numerical computations and cosine similarity calculation.

String and Random Libraries: Used for string manipulations and generating random responses.

Algorithms

Preprocessing Text:

Tokenization: Breaks down text into words or tokens.

Stop word Removal: Eliminates common words that do not carry significant meaning (e.g., "and" "the," etc.).

Punctuation Removal: Eliminates punctuation marks from text.

Cosine Similarity: Determines the similarity between user input and FAQ questions using the bag-of-words model and cosine similarity calculation.

Code Explanation

Preprocessing Text

The preprocess text function tokenizes user input, removes stop words and punctuation, and returns a list of processed tokens.

Cosine Similarity Calculation

The cosine similarity function computes the cosine similarity between user input and FAQ questions, enabling the chatbot to find the most relevant FAQ answer.

Deployment Instructions

Requirements

Python 3. installed on your system.

NLTK and NumPy libraries installed (pip install nltk numpy).