**MODULES**

**User Interaction Module:**

This module encompasses the user interface and interaction components. It allows users to engage with the chatbot using both text and voice commands. It includes features for processing user queries, understanding intent, and providing responses in a user-friendly manner.

**Artificial Intelligence (AI) and Knowledge Base Module:**

The AI and Knowledge Base module is the core intelligence of the system. It includes Natural Language Processing (NLP) algorithms for interpreting user queries and a real-time knowledge base in JSON format. This module enables the chatbot to retrieve and process relevant healthcare information to respond to user inquiries.

**Healthcare Functionality Module:**

This module incorporates various healthcare functionalities such as symptom diagnosis, doctor recommendations, and immediate measure suggestions. It leverages predictive analysis capabilities to anticipate potential health issues based on user-provided data. The module is designed to assist users in making informed decisions about their health.

**Communication and Multi-Modal Interaction Module:**

The Communication module integrates speech recognition and Text-to-Speech (TTS) functionalities. It enables users to interact with the chatbot through voice commands and receive responses in both text and speech formats. This multi-modal interaction enhances user experience and accessibility.

**Security and Integration Module:**

The Security and Integration module addresses privacy concerns and system integration challenges. It includes measures such as data encryption, user authentication, and adherence to healthcare privacy regulations (e.g., HIPAA). Additionally, it facilitates integration with other hospital management systems or electronic health records, ensuring seamless data flow and security.