



ONLINE GITA BASED PEACE & LIFE GUIDANCE SYSTEM

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Abstract: *In the modern world where people have to live in a fast and challenging environment, most of them need guidance and emotional support to help them get through personal and professional issues. Historical texts such as the Bhagavad Gita offer good philosophical lessons that assist people in achieving calmness, inspiration and sanity in life. Nevertheless, a user who requires fast guidance can find it hard to search for verses of interest in such a huge spiritual read. In solving this problem, the proposed system, which is the Online Gita Based Peace and Life Guidance System, employs the NLP. (NLP) to process the problems raised by the user and give appropriate Shlokas as recommended in the Bhagavad Gita. The system receives the description of the problem as an input, extracts the theme out of the NLP technique, and creates TF-IDF vectors of the input to the system to find out the matching verses in the Gita dataset. The system then retrieves the top ten relevant Shlokas and gives the Hindi and English meaning of the Shlokas so that the users can get the idea of what was actually meant. The system also enhances the possibility of offering useful guidance because it presents several ideas to the query, as well as lets the user experiment with other spiritual knowledge. This clever mode of recommendation makes it simpler to get philosophical teachings and use them to life scenarios today.*

Keywords: *Natural Language Processing, TF-IDF, Bhagavad Gita, Spiritual Guidance System, Text Similarity, Shloka Recommendation, Sentiment Guidance, Machine Learning*

1. INTRODUCTION

Over the last few years, mental stress, anxiety, loneliness and emotional imbalance have been the order of the day in contemporary life. People are now more in need of advice and emotional help to cope with individual, professional and social

problems. The Bhagavad Gita and other traditional spiritual scriptures are a source of great teachings on the topic of peace, restraint, duty, devotion, wisdom, and emotional equilibrium. Nevertheless, it is not easy to locate the most applicable shloka to a particular personal issue when going through it manually and this is particularly true to the users who are not conversant with the pattern and content of the text.

The swift development of Natural Language Processing (NLP) has made it possible to have intelligent systems that are capable of identifying what the user is entering as well as accessing textual information that is contextually related. In recent NLP models and semantic representation technologies like contextual embeddings and sentence similarity have ensured a much higher level of text understanding and text retrieval tasks [1], [2]. Moreover, text similarity-based recommendation and information retrieval systems are now efficient in the process of matching user queries with the relevant documents and responses [4], [7].

A number of recent researches have indicated that NLP and semantic matching techniques can be effectively used in knowledge retrieval systems, question answering systems, and in intelligent recommendation systems. Language models, language models based on transformer, like BERT and Sentence-BERT, have enhanced the contextual meaning of the human language and can better match user input and text materials [1], [2]. The retrieval-enhanced NLP systems and semantic recommendation techniques have further enhanced the capacity of smart systems to deliver customized



information in a large text corpora [10], [11] and [12].

This paper suggests an Online Gita Based Peace and Life Guidance System that will offer spiritual guidance of the individual based on Bhagavad Gita shlokas. The system takes the description of a problem with the user, recognizes the emotional or thematic context, and uses the TF-IDF vectorization and cosine similarity to select the most relevant verses within the Gita dataset. The system also does not provide just one result but suggests the top 10 matching shlokas in order that users have an opportunity to look through other pieces of guidance depending on the situation. Better understanding is also given in Hindi and English.

The accepted solution integrates the conventional spiritual knowledge with the current artificial intelligence to create a comfortable and significant guidance platform. The system can assist the user in seeking the appropriate guidance in life in a simple and intuitive way by combining the NLP-based theme predictor and similarity-based shloka recommender. This can come in handy in digital well-being solutions, religious counseling help systems, and smart spiritual knowledge search engines [6], [8].

2. LITERATURE SURVEY

Devlin et al. came up with the BERT (Bidirectional Encoder Representations of Transformers) model that was of great help to natural language understanding tasks. Deep bidirectional transformer architecture is a method that is employed by BERT to extract contextual relationships among words in a sentence. This model allows machines to comprehend the semantic meaning of text in better ways and has been used extensively in question answering, information retrieval systems and recommendation systems. Contextual capture capability of BERT also renders it appropriate to the development of smart systems that comprehend the queries of users and find the textual results of user queries in big data volumes. [1].

Sentence-BERT (SBERT), the named modification to the BERT architecture introduced by Reimers and Gurevych to generate meaningful sentence embeddings, is a popular architecture today. SBERT allows the efficient semantic similarity comparison of sentences based on cosine

similarity. It is a highly efficient method in reducing the time of computation as compared to the traditional transformer models and the technique is extensively applied in semantic search engines, recommendation systems, and text matching applications. The methodology shows the effectiveness of sentence-level embeddings in enhancing the performance of textual similarity analysis. [2].

Abbasi et al. suggested a text analysis semantic similarity model that combines topic modelling and contextual embedding. Their activity is aimed at enhancing the knowledge regarding the relationship among the textual documents through the integration of the semantic and statistical methods. The semantic patterns underlying textual data can be discovered by the proposed model that would positively influence the detection of text similarity and the performance of the recommendation system. This paper emphasizes the relevance of semantic similarity in the construction of intelligent text-based recommendation systems. [3].

The system of Li et al. is a text recommendation system founded on TF-IDF vectorization and cosine similarity. They use textual documents transformed into numerical vectors by the TF-IDF method, with cosine similarity to find the relationship between the queries and the documents made by the users. This technique can be used to efficiently retrieve relevant documents in huge text collections. The research evidences that TF-IDF is a useful method to use in information retrieval and recommendation exercises, especially in scenarios that require large amount of textual information. [4].

Zhang et al. introduced a document recommendation system which is a combination of TF-IDF and ranking algorithms to enhance the quality of information retrieval systems. They point out in their research that it is necessary to rank mechanisms to determine the relevance of retrieved documents. The system can include the features of statistical texts in combination with similarity-based ranking algorithms to make the difference in offering more precise recommendations to users. The findings indicate that the use of hybrid methods of retrieval can enhance document recommendation greatly. [5].

Jeong and Lee suggested an NLP based recommendation system which is able to analyze text based information to forecast user preference



and produce context sensitive recommendations. Their method applies the techniques of natural language processing that are used to process the input of the user and extract valuable information based on knowledge bases. This approach is especially handy when creating smart decision support systems, which give customized advice on textual queries. The study supports the use of NLP method in enhancing accuracy and satisfaction among the users of the recommendation. [6].

Rahman et al. created an automated text classification and recommendation system with the help of machine learning and NLP methods. Their algorithm deals with the processing of large amounts of textual information and divides the data into the relevant documents with the help of the semantic similarity and classification techniques. The suggested solution enhances the task of document retrieval and saves on manual effort during searching of large text repositories. This paper observes the possibility of integrating both NLP and machine learning methods to create intelligent recommendation systems that could be used to process large textual data in an efficient manner. [7].

3. PROPOSED METHOD

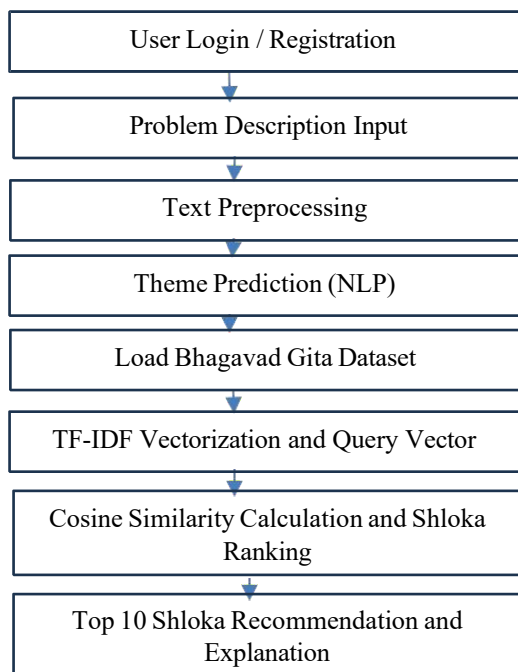


Fig.3.1 Block Diagram of Proposed Method

User registration and user login are mandatory to give access to the application only for the genuine users and to avoid fraudsters from this application.

After registration of user the data of user is stored in the database and while login user credentials are verified with the database.

The input problem is taken from the user in the format of text and multiple preprocessing operations are performed on the text data to get the data in the format of standard text. From the obtained standard text data theme is predicted by using natural language processing techniques.

The data set is collected from Kaggle.com And from the text data TF-IDF feature vectorization is applied to get the features and the query feature is collected from the user which then compared by using cosine similarity calculation and ranked shloka with specific ranking.

For the users based on the input of the user 10 top slokas are recommended and even explained in Hindi and English.

The proposed system will be able to guide the user of the problem by offering life guidance and peace-related suggestions by recommending the correct Shlokas of Bhagavad Gita depending on the description of the problem. The system applies the method of Natural Language Processing (NLP) and text similarity algorithms to interpret the input of the user and retrieve the most suitable verses out of the Gita data. The system has been able to bring together the modern methods of computation and the ancient philosophical knowledge to enable the users get meaningful advice on different situations in life.

The system operates by receiving a textual input of the user in describing his or her problem or emotional condition. The NLP techniques are applied on this input to extract the most relevant theme or context of the problem. Upon recognizing the theme, the system transforms the input text into numerical vectors with the help of Term Frequency–Inverse Document Frequency (TF-IDF) method. TF-IDF assists in establishing the significance of words in the input of the user and the data set of the Gita verses.

After the TF-IDF vector of the user input is created, the comparisons between the TF-IDF-vectors of the user input and the TF-IDF-vectors of all Shlokas present in the Gita data set are made. One then compares by the use of a similarity measurement method to find out the Shlokas that are nearest to the query of the user. According to the similarity scores, the system recalls ten best Shlokas



which most closely relate to the problem description made by the user. Such Shlokas are then shown to the user as guides to use.

The system also has the explanations in Hindi and English to each suggested Shloka such that users would get to grasp the meaning easily and also use the teachings in personal lives. Offering various Shloka suggestions is another way of guaranteeing that a user has an opportunity to examine various schools of thought and select the advice that suits him or her best.

The presented system is developed in Python and involves a web-based interface, with which users can communicate with the system without any problems. The backend results are used to process the text input, do the vectorization TF-IDF, and get the most relevant Shlokas of the dataset. The Shlokas are stored in the database together with their translation and commentaries. By so doing, the system provides a solution that serves to connect the conventional spiritual teachings and emerging computational methods, which enables users to have access to meaningful guidelines of life in a simplistic and effective way.

4. RESULTS

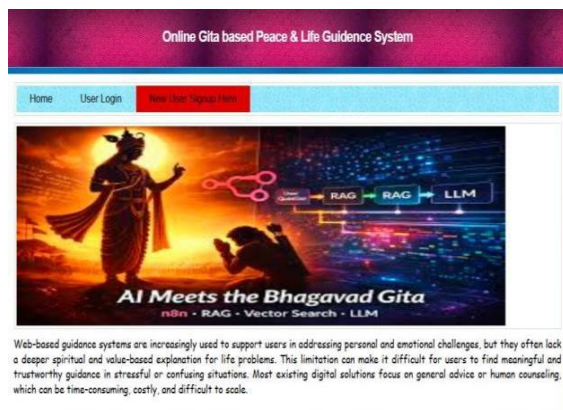


Fig.4.1 New User Sign up

In above screen click on 'New User Sign up' link to get below page

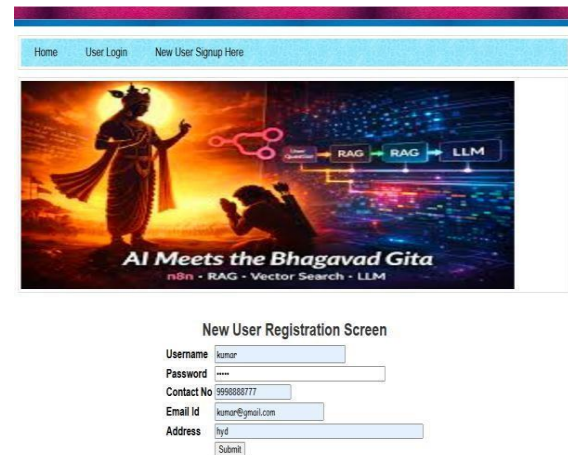


Fig.4.2 Entering Sign-Up Details

In above screen user entering sign up details and the data is stored in the database.

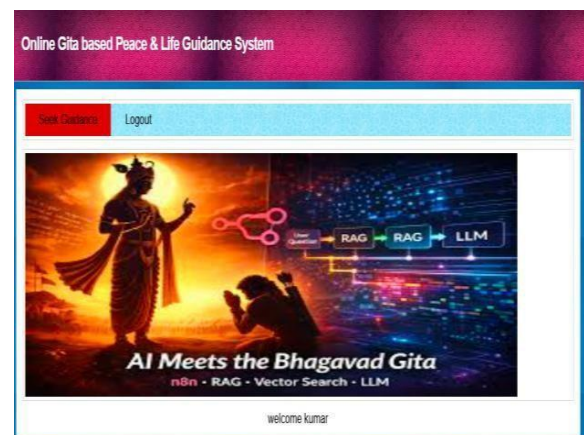


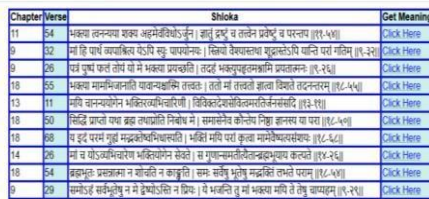
Fig.4.3 Seek Guidance

In above screen, if we click on 'Seek Guidance' option then below page get retrieved.

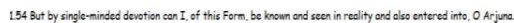


Fig.4.4 Problem Description

In above screen enter problem description and then press button to get below page



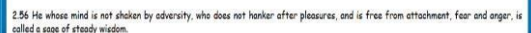
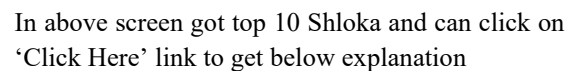
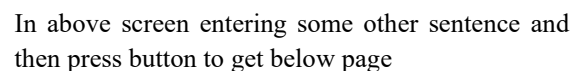
In above screen for given problem displaying top 10 Shlokas and can click on 'Click Here' link beside any Shloka to get below explanation



In above screen can see Hindi and English explanation of first selected Shloka and now go back and then click on 'Second row' to get below page



In above screen can see explanation of other Shloka.
Now enter some other sentence like below page



In above screen can see explanation of selected Shloka and similarly you can test with any other sentence.

The Online Gita Based Peace and Life Guidance System offers a unique mechanism of



dispensation of spiritual and philosophical advice utilizing the current-day Natural language Processing methods. The system parses the query issued by the user, extracts a theme which is then used to search and retrieve the relevant Shlokas in the Bhagavad Gita that would suitably fit the problem description provided by the user. The system identifies the most relevant verses and provides a number of recommendations to the user by coming up with TF-IDF vectors and comparing them to the dataset. The fact that it contains Hindi and English explanations actually assists the users in knowing what the Shlokas have to say and how they can apply the teachings in their lives. The suggested system manages to close the disconnect between traditional knowledge of spirituality and the new technological answers and provide guidance on the Bhagavad Gita in a much more reachable and convenient way.

The suggested system can be improved in a number of ways to achieve better efficiency and experience among users. The semantic meaning of user queries can be better understood by employing more advanced deep learning models in the future, including BERT or transformer-based NLP models, and can make correct recommendations. The system can also be put across to encompass more spiritual books and philosophical literature to give wider guidance. Voice recognition technology can also be integrated with it so that users are able to speak their problems rather than typing them and thus it will be easier to use. One can also create a mobile application that ensures that the spiritual guidance is easily accessible by the user at any point of time and place. Also, it is possible to combine sentiment analysis and emotional detection with the purpose to provide more individual and context-sensitive recommendations.

FUTURE SCOPE

In future the same application the same application can be adapted with voice-based input from the user to make it more interactive application. As android users are increasing day by day so this application even can be implemented for Android users.

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