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Automated Language Translation System

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ABSTRACT

The “Automated Language Translation system” it is an web based application develop to break down the language barrier between people across the world. With increasing global interdependence the easy-to-use and understand language translator is important. The system id developed using JavaScript and Natural Language Processing (NLP) techniques to maintain the accuracy of translation. The system provide accurate language translation which helps user to communicate with worldwide people very easily. The application is easy to use that anyone can easily access and use it. The main target of this application are students, travelers, professionals etc. This system supports multiple languages including English, Hindi, French, Spanish, German, Greek Telugu etc.

Keywords: Automatic language translation system, global interdependence, natural language processing, worldwide people.

1. INTRODUCTION

In today’s busy and developing world peoples businessman’s, students are constantly communication with each other for gaining the more knowledge to fulfill their dreams expand their ideas business etc. But in this process language is the main barrier the make difficulty for them to communicate with other country’s people and because of this it is not possible to propose their idea in front of others. The Automated Language Translation System is design to solve this problem. It allow people to translate the text from one language to another language very easily.

Our application use modern technic to not just translate the word but translate the whole sentence or paragraph and along with this it become easy to understand the meaning and context behind them. The application also converts the text into the voice. Our application is web based application provides wide range features to meet the needs of different type of users. Whether you are student, professional, traveller it can help you in efficient manner.

2. LITERATURE REVIEW

Chakraborty, S., Chatterjee, A., and Bhattacharjee, D. conducted a comparative study evaluating statistical machine translation (SMT) and neural machine translation (NMT) for Bengali to English translation. Their research demonstrated that NMT generally yields better performance in terms of BLEU scoring and user satisfaction.

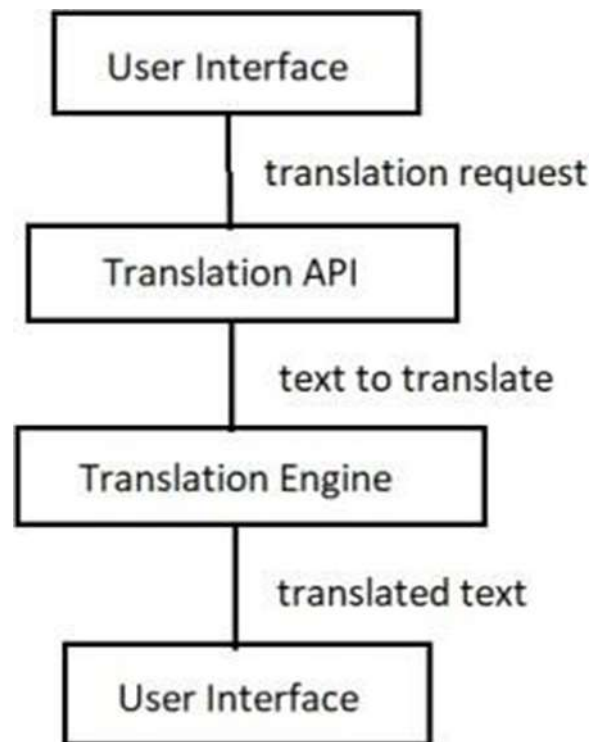
Das, S., and Dandapat, S. Explored various approaches and techniques in Indian language machine translation, highlighting key challenges and potential opportunities within this specialized field.

Farhadi, A., Hassani, H., and Ahmadi, M. Presented a web-based Persian-English translation system, outlining their methodology, including preprocessing and post-processing steps, and demonstrating the system’s usability.

Gao, Q., and Xia, Y. Developed and evaluated a Chinese-English machine translation system, highlighting its performance and practical usability for end- users through a comprehensive user study.

Hussain, N., and Ahmad, S. Designed a hybrid Urdu-English translation system, combining rule-based and statistical techniques to enhance translation quality. Their system was noted for its user-friendly design and effectiveness in accurately translating complex language structures.

3. PROPOSED WORK



The system's architecture includes the following components:

1. User Interface (UI): The user interface is the site where user can interact with system and can provide text for translation from one language to another language.
2. Translation API: Translation API is the bridge between the user interface and translation engine. It identify the input language and in which language user want output and provide the information to translation engine.
3. Translation Engine: It is the main part of the system which process on text document and translate it into target language using advance technology such as Natural Language Processing(NLP). This technology ensures that the translation should be meaningful and understanding.
4. Output UI: It is interface where user get its translated text And it's the final step of translation.

4. Result and discussion



Figure1: User language selection**Figure2: Translated text**

5. Conclusion

In conclusion our Automated Language Translation System effectively breakdown the communication gap between multiple peoples by providing them user friendly experience and efficient reliable translation to the user. It built with modern technology which ensures the accuracy and context understanding. We faced multiple challenges but with careful planning and testing we were able to overcome this challenges very easily and create the user friendly application. By advancing the accessibility and simplifying interactions, this system is a valuable asset for global communication that we are proud of.

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