



Real Time Machine Translation System Between Indian Language

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Abstract— Language understanding is one of those perpetual challenges which has dogged research from many decades. As a means of connecting with others, but communication is not limited to a single language. India contains around 121 different languages. As a result, there is a linguistic barrier. Natural Language Processing is the process of developing a communicational interface between machines and humans. We have developed a model that turns the supplied source language text (Marathi) into the desired language text in this Text to Text Translation (Gujarati). Because LSTMs allow us with a vast variety of parameters like as learning rates, input and output biases, and there is no need for existence, this model is constructed by adding multilingual features to the LSTM Model based on deep learning Principles.

The goal of the proposed is to create a deep learning-based translation system. The suggested system would use a variety of models to perform text-to-text translation, after which the input text will be translated into the target language (text).

Keywords— Long Short Term Memory, Encoder-Decoder Model, Neural Machine Translation, Indian language.

I. INTRODUCTION

Text to text translating systems are made and still used from several decades with the motive and goal of providing an understanding of the different languages in textual form. The system flow can be broken down into multiple steps: recognizing the text which is given input, Machine Translation is a process of converting one text language to another through automatic translation. In Machine Translation, the text will need to be broken down into base elements and switching it into the target language.

Adding the Long Short Term Memory (LSTM) [18] technique to an Neural Machine Translation (NMT) [19] model, which is similar to the RNN (Recurrent Neural Network), however it is a

traditional LSTM that will assist the model perform much better than the RNN. It can tolerate vanishing gradients, which is something RNN can't. It only remembers the present state and ignores prior states that it considers irrelevant.

This completes the process, and it also makes predicting the next word in a phrase simple. The result will be better if the output language is use. Furthermore, this technology aids in the comprehension and recognition of the native language, as well as the user interface-related technologies connected with the UI. Converting any Indian language to another Indian language is difficult, but not impossible.

The paper provides a novel approach for translating text from one Indian regional language to another.

II. RELATED WORK

R. Vyas, et. al. [1] focuses on converting English to Hindi, utilising Natural Language Processing to accept current time audio as an input (NLP). A machine translation (MT) system was used. The focus of this work was on converting English to Hindi, which means that additional Indian languages were not considered in addition to Hindi and English.

R. Nakave, et. al. [2] focuses on a proposed system that uses a Speech Recognition Device to provide audio input for one language. After then, the audio will be converted to text. Our neural network model receives this input text and processes it. When all of the input text has been translated from the source to the destination language. Because our Neural Network model's overall structure includes an encoder and a decoder, both are Recurrent Neural Networks that are linked to Thought Vectors.

J. Nair, et. al. [3] focuses on Text is translated from one language to another via machine translation systems. They used the machine learning domain to construct this system. They propose a Hybrid Machine Translation (HMT) that combines Rule-based Machine Translation (MT) and Statistical Machine Translation (SMT) in this study (SMT). Because the study focuses on text-to-text translation, they will concentrate on English to Hindi

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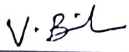
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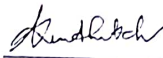
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