Title: English-to-Bangla Language Translation: A Comparative Study of GPT-3 and Attention-Based Encoder Decoder

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Abstract: This study is designed as a sequence-to-sequence neural network and GPT-3 for English-to-Bangla machine translation. Here, we have analyzed the results in different ways in this study: The first one is embedding-based analysis with Pearson and Spearman correlation and a maximum of 77% similarity between actual and expected sentences has been achieved, the second one is BLEU score, and the third is the human analysis and a comparatively acceptable score has been obtained. We also obtained a 0.85 BLEU score in this study, and we found 93% accuracy of the generated translation output by using the human-based subjective score.

Key words: English-to-Bangla translation; Sequence-to-sequence neural network; GPT-3; Machine translation; BLEU score;

https://link.springer.com/chapter/10.1007/978-981-97-3562-4_14