ARTIFICIAL INTELLIGENCE IN TRANSLATION.

Ергизова Ю. Р., *Студент Факультета Английской филологии Узбекского Государственного университета мировых языков*

Махмудова Н.М, *Старший преподаватель кафедры Испанской практики*

Abstract The article covers various aspects of the use of artificial intelligence in translation, including automatic translation, tools to assist the translator and the development of hybrid models that combine the capabilities of artificial intelligence and human translators.The article also explores the current state of artificial intelligence in translation, describing the application of neural networks, machine learning and deep learning algorithms. They also analyze in detail the benefits that artificial intelligence can bring to the field of translation and the disadvantages of using it.

Keywords: artificial intelligence, translation activity, automatic translation, neural networks, machine learning, deep learning algorithms, constraints, hybrid models.

In today's world, artificial intelligence (AI) is becoming more and more pervasive in various fields of endeavor, and one such field is translation. With the use of advanced technologies such as neural networks, AI is bringing significant changes and improvements to the translation process.

Artificial intelligence promises to make translation activities easier and faster, as well as improve translation quality. Automatic translation based on artificial intelligence offers new opportunities to quickly and accurately translate texts into different languages, reducing the time and costs of translation projects.

However, in addition to automatic translation, artificial intelligence also offers tools to assist the translator. Hybrid models that combine the capabilities of artificial intelligence and human translators create a new approach to the



translation process that combines the power of artificial intelligence with the linguistic and contextual knowledge of the translator.

Artificial Intelligence (AI) assisted translation offers several advantages that can greatly facilitate and improve the translation process:

1. Speed: Artificial intelligence is capable of processing large volumes of text at high speed. This significantly reduces the time taken to translate projects and increases the productivity of translators.

2. Quality: Modern AI systems utilize neural networks and deep learning algorithms that provide more accurate and higher quality translations. AI is able to learn from large amounts of data, which allows it to improve its translation skills over time.

3. Scaling up: Artificial intelligence can process different languages and accumulate large amounts of lexical and grammatical information. This allows it to scale up translation capabilities and provide translation to a large number of languages.

4. Automation: AI can automate routine tasks in the translation process, such as text alignment, spelling and grammar checking, and one-to-one translations. This allows translators to focus on the more complex and creative aspects of the job.

5. Cost reduction: The use of AI in translation can reduce the cost of translation services. By automating and making the translation process more efficient, companies can save time and resources that were previously spent on translation projects.

However, it should be noted that artificial intelligence does not completely replace the human translator and there are some limitations to its application.

The use of artificial intelligence (AI) in translation has some negative aspects that are important to consider:

1. Limitations in understanding context: AI may have difficulty understanding and interpreting complex contextual nuances, wordplay, metaphors and idiomatic expressions. As a result, the translation system may miss or misinterpret them,



leading to a distortion of meaning and loss of accuracy.

2. Problems with polysemousness: AI can hinder the accurate understanding of polysemous words and phrases, especially in contexts where meaning is determined solely through additional meanings. This can lead to mistranslations and insufficient consideration of semantic nuances.

3- Lack of a sense of style: AI is not always able to correctly capture and convey the style and tone of a text, which can lead to a lack of naturalness and emotionality in the translation. Often, the translation requires creativity to convey specific stylistic nuances that the AI cannot yet fully recreate.

4. International or cultural bias: AI may not correctly convey domestic or culturally specific concepts, which may lead to misunderstandings or inappropriate translations for the target audience. AI still faces some limitations in interpreting and adapting to different cultural contexts.

5- Ethical and social issues: The use of machine translation, especially automatic translation, can create ethical issues such as copyright infringement and lack of privacy of information. It may also pose a threat to the translation profession as professionals may face the threat of job loss due to AI automation.

It is important to consider these negative aspects of using AI in translation and find a balance between automation and manual intervention to ensure maximum accuracy and quality of translation.

The use of AI in translation offers many benefits, but limitations related to understanding context and polysemy, lack of a sense of style, possible cultural bias, and ethical and social issues must be considered.

Further development of artificial intelligence in translation will require continuous improvement of deep learning algorithms, linguistic and cultural sensitivity, and closer interaction between artificial intelligence and humans. Hybrid models that combine the power of artificial intelligence and the skills of the translator represent a promising practice that could lead to more accurate and customized translation.

There are several neural networks that help with translation:



1. Sequence-to-Sequence (Seq2Seq) models: This is one of the most common neural network architectures for machine translation. They consist of an encoder that converts the input word sequence into a vector representation, and a decoder that generates an output word sequence based on the encoder vector.

2. Transformer: This is new neural network architecture designed for machine translation. It is based on the idea of attention, allowing the network to focus on the most important parts of the input data. Transformer has become one of the most successful approaches to machine translation and is used by services such as Google Translate.

3. Neural Machine Translation (NMT): NMT — is a generic name for various neural network models used in machine translation. They typically use architectures such as Seq2Seq or Transformer and are trained on large parallel corpora of bilingual texts. The model takes input sentences in one language and generates a translation in the other language.

Bibliographic list:

1) Neural Machine Translation. Cambridge University Press.

2) N. Parmar, N. Uszkoreit Attention is all you need. In Advances in neural information processing systems (pp. 6000-6010).

3) W. Schuster Google’s neural machine translation system: Bridging the gap between human and machine translation.

4) Статья https://cyberleninka.ru/article/n/struktura-perevodcheskoy-deyatelnosti-v-epohu-tsifrovizatsii

5) Статья «Новейшие технологии в переводе» Сборник статей XXIX Международной научной конференции (16–18 октября 2018 г.)