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NEW TECHNOLOGIES IN TRANSLATION: MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE

The inception of written translation coincided with the evolution of written language, with its initial focus primarily on religious texts. It is commonly accepted that St. Jerome was the first translator, undertaking the translation of the Bible from Greek and Hebrew into Latin. He dedicated 23 years to this endeavor, followed by an additional 15 years spent annotating his finished work to provide further elucidation of its content (Hes, 2019).

Nowadays, translation activities are becoming more and more in demand due to the rapid development of information technologies. A modern specialist, such as an engineer, economist or manager, has to not only review technical and other literature to get the information they need, but also translate it to understand the meaning.

The purpose of the study is to analyze the use of new technologies in translation, such as machine learning and artificial intelligence.

Initially, it's important to acknowledge that machine learning represents a subset of artificial intelligence techniques, addressing problems indirectly through the identification of patterns within data following extensive training of algorithms on numerous examples (Hlaiboroda, 2023). As commonly understood, machine learning empowers computers to tackle tasks previously exclusively managed by humans.

Machine translation also has its advantages and disadvantages. The first and foremost advantage is the high translation speed. Just a few seconds and your text

translation is ready. You don't need to look up every word in a dictionary or look for a professional interpreter to do your job.

The next advantage is accessibility. Anyone who has access to the Internet or installs an offline version of a machine translator can access it anytime from anywhere and get a translation. Also, machine translation can handle multiple languages, which means that businesses can reach a wider audience by translating their content into multiple languages simultaneously. In general, machine translators are not useless: they help Internet users quickly solve work problems, choose a hobby, and communicate with friends.

Next, let us look at the disadvantages of machine translation. First, it is a lack of accuracy: machine translation cannot fully understand the meaning and context of the text, which can lead to inaccurate translations. Essentially, translating text from one language to another requires not only comprehending the text itself but also grasping the cultural context in which it originated. A broad spectrum of knowledge, particularly in recognizing the contextual elements related to pragmatics, is essential for accurate translation (Kugai et al., 2018, 407).

The main disadvantage of machine translation is its low quality. Automatic translation services mostly translate text verbatim. They can convey the general essence of the text. However, they make lexical and grammatical mistakes. Of course, the lack of a human factor is a big drawback. Machine translation cannot understand all the nuances and emotions in the text like a human. Therefore, such types of text as literature, poetry and legal documents are best translated by humans, as they are better able to cope with this task, than machine technologies.

Today, there are three types of automatic translation: grammatical, statistical, hybrid (Hes, 2019).

The grammar framework examines the text utilized during the process. Translation relies on comprehensive dictionaries and grammatical rules that encompass semantics, morphology, and syntax. This process involves the

transformation of the text, resulting in two interconnected texts: the source and target, with related structures.

Statistical translation is carried out on the basis of statistical analysis of words and symbols. The system performs an analysis of correspondences in a language pair, working on the principle of self-learning. Depending on the size of the dictionary, the translation will be more or less accurate. Each new text translated using this system is improved (Tsvierkun).

Modern technologies are now also affecting the video industry. The simplest innovation for translation is automatic translation of subtitles. In addition, the software already allows automatic online video translation. This technology allows the media, international companies and educational organizations to scale their content and business globally. Services are especially relevant for international companies, where everyone must understand each other and work with up-to-date information. That is why the world's largest companies use video translation technology to improve mutual understanding with both foreign clients and colleagues. For example, during the pandemic, video communication became very popular, and it was the only way for international companies to continue their work.

In conclusion, machine translation can help to understand the general meaning of the text, but it cannot provide a competent, accurate translation and completely replace a human. Therefore, it is still impossible to create high-quality translation of literary texts without the participation of professional interpreter.

REFERENCES

1. Hes, O. (2019). Pershi perekladachi ta pershi instrumenty. *Tabula. Biuro pravylnykh perekladiv*. Retrieved from https://tabula.com.ua/ua/blog/kak-sovremennyie-tehnologii-menyayut-rabotu-perevodchika/

2. Hlaiboroda, M. (2023). Shcho take mashynne navchannia? Use, shcho vam potribno znaty. *Incrypted*. Retrieved from https://incrypted.com/ua/mashynne-navchannja/

3.   Kugai, K., Shaduik, D. (2018). Problems of computer-assisted. *Innovatsiini tendentsii pidhotovky fakhivtsiv v umovakh polikulturnoho ta multylinhvalnoho hlobalizovanoho svitu:* zbirnyk tez dopovidei III Vseukr. nauk.-prakt. konf., m. Kyiv, 10 kvitnia 2018r. K.: KNUTD. 406-410.

4.   Tsvierkun, Yu. Vydy mashynnoho perekladu. *Profpereklad. Pereklad i lokalizatsiia.* Retrieved from https://profpereklad.ua/vidi-mashinnogo-perekladu/

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COMMUNICATIVE COMPETENCE FOR FUTURE *LAND MANAGERS* AND *GEODESISTS:* ENGLISH IN THE FOCUS

The problem of communication in society is the focus of modern science. Many researchers have been devoting their work to communicative activity at the English language classes (Littlewood, 1981; Revell, 2014). For future land managers, as well as for future geodesists, it is especially important to be professionally competent in English because their career may depend on international exchanges, communication with foreign colleagues, presenting in different conferences and symposia, and publishing in scientific journals. This situation presents a fascinating duality. On the one hand, globalization has solidified English as the scientific and professional *lingua franca*. On the other, teaching