TARJIMA VA AMALIYOTNING YANGI UFQLARI:SUN'IY INTELLEKT,TABIIY TILNI QAYTA ISHLASH VA TARJIMADA KREATIVLIK

NEW HORIZONS OF TRANSLATION AND PRACTICE: ARTIFICIAL INTELLIGENCE, NATURAL LANGUAGE PROCESSING AND CREATIVITY IN TRANSLATION

НОВЫЕ ГОРИЗОНТЫ ПЕРЕВОДА И ПРАКТИКИ: ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ, ОБРАБОТКА ЕСТЕСТВЕННОГО ЯЗЫКА И ТВОРЧЕСТВО В ПЕРЕВОДЕ

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Annotatsiya: Maqolada tarjima amaliyotining zamonaviy bosqichi va sun'iy intellekt texnologiyalarining so'zlashuv tillarini qayta ishlash jarayoniga ta'siri yoritiladi. Unda AI asosidagi tarjima vositalarining samaradorligi, ularning tarjimon faoliyatiga integratsiyalashuvi hamda kreativ yondashuvlarni talab qiluvchi tarjima jarayonlari tahlil qilinadi. Shuningdek, raqamli muhitda tilni qayta ishlash texnologiyalari tarjima sifati, tezligi va moslashuvchanligiga qanday ta'sir ko'rsatishi ilmiy asosda ko'rib chiqiladi. Maqola tarjimonning yangi kompetensiyalarini belgilash, innovatsion texnologiyalar bilan uyg'un ishlash imkoniyatlari va ilg'or usullarning amaliy qo'llanilishi bo'yicha xulosalar beradi.

Kalit so'z: sun'iy intellekt, mashina tarjimasi, tabiiy tilni qayta ishlash, neyron tarmoqlar, kreativ tarjima, kreativ tarjima,tarjima texnologiyalari.

Annotation: The article discusses the current stage of translation practice and the influence of artificial intelligence technologies on the process of processing spoken languages. It analyzes the effectiveness of AI-based translation tools, their integration into translators' activities, and translation processes that require creative approaches.

It also examines how language processing technologies in the digital environment affect translation quality, speed, and flexibility on a scientific basis. The article provides conclusions on the definition of new translator competencies, the possibility of harmonious work with innovative technologies and practical application of advanced methods.

Keywords: artificial intelligence, machine translation, natural language processing, neural networks, creative translation, creative translation, translation technology

Аннотация: В статье рассматривается текущий этап практики перевода и влияние технологий искусственного интеллекта на процесс обработки устных языков. Анализируется эффективность инструментов перевода на базе ИИ, их интеграция в деятельность переводчиков и процессы перевода, требующие творческих подходов. Также рассматривается, как технологии обработки языка в цифровой среде влияют на качество, скорость и гибкость перевода на научной основе. В статье приводятся выводы по определению новых компетенций переводчика, возможности гармоничной работы с инновационными технологиями и практического применения передовых методов.

Ключевые слова: искусственный интеллект, машинный перевод, обработка естественного языка, нейронные сети, творческий перевод, творческий перевод, технологии перевода

In the era of digital transformation, information exchange has accelerated at an unprecedented rate. The need for rapid translation of scientific, technical, legal and literary texts created in different languages has increased dramatically. Whereas traditional translation has relied solely on human knowledge, in the modern era, artificial intelligence (SI) and natural language processing (NLP) technologies are being actively introduced into the translation process [1] This process has taken the quality, speed and scale of translation to a new level. Today, machine translation is emerging not only as an auxiliary tool but as an independent technological platform[2]. At the same time, as experts note, translation is not only a technical process, but also a means of intercultural communication. Therefore, the issue of balance between technological progress and human thinking occupies a central place in this article. The combination of NLP, NMT, neural networks, and deep learning mechanisms leads to significant improvements in text and speech recognition and translation. Despite all the advances in this area, human translators and editors need to maintain a balance. For businesses and companies looking to have their own translation system, contact Shaip

[1] https://arxiv.org/abs/1409.0473,
[2] 2. Nida, E. A. (2001). Context in Translating. John Benjamins.

for artificial intelligence-based conversational solutions equipped with NLP and machine translation.

Development of translation systems based on artificial intelligence

Where translation systems powered by artificial intelligence initially relied on statistical models, today they are driven primarily through neural networks. The neural machine translation (NMT) approach treats text as a cohesive semantic structure, rather than as a separate collection of words[3]. This significantly increased the fluency and logical integrity of the translation. Modern translation systems operate on the basis of synergistic algorithms, which means that they take into account syntax, semantics, and pragmatic factors at the same [4]time. For example, it became possible to correctly interpret polyseurous words in English depending on the context. However, systems still have limitations in fully identifying ironic expressions, sarcasm and expressions specific to national culture. Security and ethical issues are also important in the SI-based translation process. Because in the process of automatic translation, there is a possibility that confidential documents or personal data may be transmitted. Therefore, data protection is constantly relevant in the implementation of these technologies.

Natural language processing technologies and translation quality

Natural Language Processing (NLP) technologies are the intellectual "engine" of the translation process. With the help of these technologies, the computer detects syntactic connections between words, sentence structure as well as semantic connections [5] As a result, the translated text is not only grammatically correct, but also logically consistent and stylistically coherent. NLP-based systems allow for the automation of terminological adaptation. For example, the uniform translation of industry terms in technical, medical, or legal texts ensures stable quality This is especially important in large projects, collective translation processes.

NLP technologies also serve to determine the overall tone of the text. For example, the language of an official document, scientific style, or artistic expression is automatically distinguished, and these stylistic features are preserved to the maximum extent in the translation process. This serves to bring the quality of machine translation closer to human translation The widespread application of AI translation technologies has led to significant changes in the translation profession and related fields. The traditional translation workflow has been transformed, with human translators taking on the role of post-editors reviewing and refining machine-generated translations instead of

[3] https://arxiv.org/abs/1706.03762
[4] Koehn, P. (2020). Neural Machine Translation. Cambridge University Press.
[5] https://www.hutchinsweb.me.uk/CU-MT-2005.pdf

working from source texts. This shift has shifted the qualification requirements in the industry, focusing more on editing skills and technical proficiency with translation tools rather than pure translation ability. The economic impact on the translation market has been multifaceted. While AI has reduced costs and increased access to key translation services, it has simultaneously lowered prices for direct translation jobs. This has created market pressure for human translators to specialize in areas where AI is still underperforming, such as creative translation or highly specialized technical fields. Unsurprisingly, the increase in the volume of translation performed using artificial intelligence has created new opportunities for human linguists in the roles of quality control, localization, and cultural adaptation that require human reasoning.

Cooperation with human translator and artificial intelligence

In modern translation practice, the cooperation of human and artificial intelligence has become a necessity, not an alternative. The "human-in-the-loop" model has been established today as the leading approach. Based on this model, the machine first creates a draft translation, and then a human translator edits it, corrects content subtleties and stylistically perfects it. This process is called "post-editing" and has become an integral part of the modern translation profession. Research shows that translations prepared through post-editing are more effective than traditional translations in terms of time and quality. In addition, it can be seen that the professional competencies of translators are also changing. Now, it is required that a professional translator not only know the language perfectly, but also be able to work with translation technologies, CAT tools, terminology management systems. This also calls for fundamental reforms in the translator training system.

Conclusion

Artificial intelligence has fundamentally changed the field of translation and has taken it to a new level. Machine translation offers unparalleled advantages in terms of speed and volume. NLP technologies, on the other hand, play an important role in stabilizing translation quality and ensuring methodological accuracy. At the same time, it is important to remember that the process of translation is not just a collection of technical algorithms, but a cultural, social, and aesthetic process. Human thinking, creative approach and cross-cultural sensitivity still remain an integral part of translation. In the future, the field of translation will continue to evolve based on the synergy of human and artificial intelligence. However, no matter how advanced technological progress is, it is becoming increasingly evident that the translation process is not just a set of algorithmic operations. Human thinking, creative approach, deep understanding of the cultural context, emotional tone and preservation of the author's style remain the responsibility of human translator. In particular, living thinking and aesthetic intuition

play an important role in the translation of texts of artistic, journalistic and creative content.

Therefore, the field of future translation is based not on the contradiction of artificial intelligence and human thought, but on their harmonious cooperation. The model of "human + artificial intelligence" is emerging as the most optimal and effective approach in translation. This model not only increases the speed of translation, but also stabilizes quality, ensures terminological accuracy, and enhances reliability in international information exchange.

In conclusion, the translator of the future should be not only a specialist with excellent knowledge of the language, but also a person with a deep understanding of modern technologies, with the ability to effectively use digital tools and creative thinking. It is this harmony that ensures the sustainable development of the field of translation and further strengthens it as one of the most important tools of human development.

References

1. Bahdanau, D., Cho, K., & Bengio, Y. (2014). Neural Machine Translation by Jointly Learning to Align and Translate. https://arxiv.org/abs/1409.0473
2. Nida, E. A. (2001). Context in Translating. John Benjamins.
3. Vaswani, A., et al. (2017). Attention Is All You Need. https://arxiv.org/abs/1706.03762
4. Koehn, P. (2020). Neural Machine Translation. Cambridge University Press.
5. Hutchins, J. (2005). Current Trends in Machine Translation. https://www.hutchinsweb.me.uk/CU-MT-2005.pdf
6. Jurafsky, D., & Martin, J. H. (2023). Speech and Language Processing. https://web.stanford.edu/~jurafsky/slp3/
7. Somers, H. (2003). Translation Memory Systems. https://www.mt-archive.info/10/Somers-2003.pd
8. O'Brien, S. (2012). Machine Translation and Post-editing. https://www.researchgate.net/publication/259385381
9. Pym, A. (2011). Translation Technology and Translator Training. https://usuaris.tinet.cat/apym/on-line/training-technology
10. Hutchins, W. J. (2005). Machine Translation: A Brief History. Computer Science
11. Department, University of Cambridge.
12. 3. O'Brien, S. (2012). Crowd-sourcing, Machine Translation and the Translator's Role.
13. Translation Spaces, 1(1), 1–20.

14. 4. Bowker, L., & Barlow, M. (2004). Computer-Aided Translation Technology: A Practical
15. Introduction. University of Ottawa Press.
16. 5. Torres-Hostench, O. (2018). The Impact of Machine Translation on Translation Studies.
17. Translation and Interpreting Studies, 13(2), 230-247.