

THE IMPACT OF AI AND MACHINE TRANSLATION ON TRANSLATOR'S ROLES

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Annotation: *This paper explores the evolving role of artificial intelligence (AI) and machine translation in modern communication, highlighting both their strengths and limitations. AI-based translation systems, such as Google Translate, DeepL, and Microsoft Translator, offer rapid, scalable, and context-aware solutions, enabling cross-linguistic communication across diverse platforms. However, despite their efficiency, these systems cannot fully replicate human understanding of cultural nuances, idiomatic expressions, specialized terminology, and emotional subtleties. Human translators remain essential for ensuring accuracy, tone, and cultural fidelity, particularly in complex or sensitive texts. By analyzing the complementary roles of AI and human translation, the study emphasizes the importance of using AI as a supportive tool rather than a replacement, fostering efficient yet meaningful communication across languages.*

Key words: *AI translation, machine translation, human translation, cultural nuances, linguistic accuracy, cross-cultural communication, language technology, translation quality.*

Annotatsiya: *Ushbu maqola zamonaviy kommunikatsiyada sun'iy intellekt (SI) va mashina tarjimasining rivojlanayotgan rolini o'rganib, ularning kuchli va cheklangan tomonlarini tahlil qiladi. Google Translate, DeepL va Microsoft Translator kabi SI asosidagi tarjima tizimlari tez, keng qamrovli va kontekstni hisobga oluvchi yechimlarni taqdim etib, turli platformalarda tillararo muloqotni osonlashtiradi. Biroq, samaradorligiga qaramay, bu tizimlar madaniy nozikliklar, idiomatik ifodalar, ixtisoslashgan terminologiya va hissiy ohanglarni to'liq tushuna olmaydi. Murakkab yoki sezgir matnlarda aniqlik, ohang va madaniy moslikni ta'minlash uchun inson tarjimonlari muhim bo'lib qoladi. SI va inson tarjimasi o'rtasidagi qo'shimcha rollarni tahlil qilib, maqola SI-ni insonning o'rnini bosuvchi emas, balki yordamchi vosita sifatida ishlatishning ahamiyatini ta'kidlaydi.*

Kalit so'zlar: *Sun'iy intellekt tarjimasi, mashina tarjimasi, inson tarjimasi, madaniy nozikliklar, lingvistik aniqlik, tillararo kommunikatsiya, til texnologiyalari, tarjima sifati.*

Translation is the process of transferring meaning from one language to another while preserving the original message, intent, and style. It is not simply replacing words from the source language with words from the target language; rather, it requires understanding grammar, context, and cultural nuances to produce a natural and accurate text. Effective

translation ensures that the target audience receives the same information and impression as the original readers.

AI has always been and treated as one of knowledge field. AI can augment human capabilities by supporting individuals in their work and facilitating improved decision-making (1; p4). By analyzing vast amounts of data with speed and precision, artificial intelligence supports individuals in their professional tasks, reducing routine workloads and allowing them to focus on more creative and complex responsibilities. Moreover, AI systems assist in improved decision-making by providing accurate predictions, identifying patterns, and offering data-driven recommendations that humans might otherwise overlook. As a result, the collaboration between human intelligence and artificial intelligence leads to greater efficiency, higher accuracy, and more informed outcomes across various fields such as education, healthcare, and business.

AI has some influences in the field of translation too, as it has significantly reshaped the way texts are translated. AI can rapidly generate draft translations, which increases efficiency and allows large amounts of content to be processed in a short time (2; p179). By relying on advanced algorithms and extensive language databases, AI systems can produce fluent and coherent translations while maintaining consistency in terminology and style. In addition, these technologies support real-time translation and multilingual communication, making information more accessible across linguistic boundaries. As a result, AI-driven translation tools contribute to faster information exchange and greater global connectivity.

AI-driven translation systems play an increasingly significant role in enabling effective cross-cultural communication in a globalized world. By relying on vast multilingual datasets and advanced language models, AI can recognize idiomatic expressions, contextual meanings, and culturally specific references that go beyond word-for-word translation. AI translations are both accurate and culturally sensitive, respecting the nuances and complexities of diverse languages, religions, and cultures (2; p181). This capability allows translated texts to maintain their original tone, intent, and pragmatic meaning, whether in academic writing, media content, international business, or diplomatic communication. Moreover, AI systems can adapt language use to different registers and social contexts, ensuring that formal, informal, or culturally appropriate expressions are preserved. As a result, AI translation contributes to clearer understanding between communities, reduces cultural misinterpretation, and supports more inclusive global interaction by making information accessible across linguistic and cultural boundaries.

The rapid advancement of artificial intelligence has transformed translation into a fast and widely accessible process across multiple domains. Modern AI technologies enable the processing of large volumes of multilingual content with a high level of consistency and contextual awareness. Prominent AI-based translation systems, including Google Translate, DeepL, and Microsoft Translator, are now integral tools in the industry, offering scalable solutions for text, speech, and image translation (3; p434). These systems support real-time communication, making it possible to translate documents, conversations, and visual

information almost instantly. Their versatility allows them to be applied in education, international trade, tourism, media, and digital platforms, where speed and reach are essential. Consequently, AI-powered translation systems contribute to the globalization of information by removing language barriers and facilitating smoother interaction between speakers of different languages on a large scale.

Moreover, AI systems require vast amounts of data and computational resources, limiting their accessibility to smaller organizations. Another issue is the need for frequent updates to adapt to evolving languages, as models can quickly become outdated without retraining. This suggests that while AI translation has advanced, it is not yet a complete replacement for human translators (4; p8).

Evaluating the quality of machine translation requires a thorough and systematic approach that goes beyond surface-level comparison. To evaluate the quality of machine translation, it is a necessity to compare the machine translation with the human translation and the source language at a deeper and more comprehensive textual level, including the levels of the words, syntax, semantics, pragmatics, and discourse (4; p191). This process allows evaluators to identify subtle errors that may not be immediately visible, such as incorrect word choices, awkward sentence structures, or misinterpretation of idiomatic expressions. Examining semantics ensures that the meaning of the original text is accurately conveyed, while analyzing pragmatics checks whether the translation respects context, tone, and intention. Additionally, discourse-level evaluation ensures coherence and cohesion throughout the text, maintaining logical flow and readability. By conducting such detailed assessments, researchers and practitioners can measure the reliability, accuracy, and overall quality of machine translations, highlighting both their strengths and areas in need of improvement.

Human translation remains a cornerstone of effective cross-linguistic communication, particularly in contexts that demand precision and cultural sensitivity. Human translation, while slower and more expensive, offers unparalleled advantages in understanding context, cultural nuances, and specialized terminology and can prevent such blunders (2; p179). Professional translators can interpret idiomatic expressions, humor, and subtle cultural references that AI systems may misread or mistranslate. They are also capable of handling specialized content, such as legal, medical, or technical documents, where accuracy is critical and errors could have serious consequences. Additionally, human translators can adapt the tone, style, and register of a text to suit the intended audience, ensuring that the message is both clear and culturally appropriate. As a result, while AI translation provides speed and convenience, human translation ensures depth, precision, and fidelity to the original meaning, making it indispensable in high-stakes or nuanced communication.

While automatic translation can efficiently convey basic information across language barriers, it often falls short in contexts where accuracy, nuance, and cultural sensitivity are essential. While automatic translation is sometimes sufficient for conveying information across language barriers, many scenarios still require high-quality human translation (6;

p37). For instance, legal contracts, medical documents, literary works, and diplomatic communications demand precise terminology and an understanding of context that only a skilled human translator can provide. Human translators can interpret idiomatic expressions, cultural references, and stylistic subtleties, ensuring that the intended meaning is preserved and potential misunderstandings are avoided. Furthermore, in professional or high-stakes environments, the consequences of errors can be significant, making human translation indispensable. Therefore, despite the convenience and speed of automatic translation, human expertise remains crucial for maintaining quality, clarity, and cultural fidelity in sensitive or complex texts.

AI and machine translators are highly efficient in terms of speed and handling large volumes of text, but they remain limited when it comes to capturing human emotion and deeper context. Even though AI and machine translators may seem faster and more accurate than humans, human translation is still superior in conveying emotion. Human translators can understand the tone, intent, and emotional subtleties of a text, which is especially important in literary works, speeches, and culturally rich content. Moreover, they can interpret cultural nuances, hidden meanings, and delicate expressions, ensuring that the translation resonates with the target audience in a way that machines cannot fully replicate.

AI and machine translators can be effectively used by humans as tools, advisors, and assistants in the translation process, but they cannot fully replace human translators. These technologies help speed up work by providing quick drafts, suggesting alternative word choices, and supporting understanding of unfamiliar languages. However, the final responsibility still lies with the human, who evaluates accuracy, refines meaning, and ensures cultural and emotional appropriateness. Human judgment, creativity, and ethical awareness remain essential, especially in complex or sensitive texts. Therefore, rather than replacing humans, AI and machine translators function best as supportive technologies that enhance human performance and productivity in translation.

In conclusion, while AI and machine translation technologies have revolutionized the way we bridge language barriers by offering speed, scalability, and impressive accuracy, they cannot fully replicate the depth, nuance, and emotional understanding that human translators provide. AI systems excel in processing large volumes of text, handling multiple languages, and providing immediate translations, making them invaluable as tools and assistants. However, human translators remain indispensable for interpreting context, cultural subtleties, idiomatic expressions, and specialized terminology, ensuring that meaning, tone, and emotional resonance are preserved. The most effective approach to translation, therefore, lies in combining the strengths of both—leveraging AI for efficiency and human expertise for precision, creativity, and cultural fidelity—resulting in translations that are both accurate and meaningful across diverse linguistic and cultural contexts.

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