CHALLENGES AND NUANCES IN AI TRANSLATION FROM UZBEK TO ENGLISH. A CASE STUDY OF "THE UZBEK CHARACTER" BY SHUKUR KHOLMIRZAYEV

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ARTICLE INFORMATION

ARTICLE HISTORY:
Received: 12.02.2026
Revised: 13.02.2026
Accepted: 14.02.2026

KEYWORDS:
Artificial intelligence, machine translation, Uzbek–English translation, cultural nuances, "The Uzbek character".

ANNOTATION

This article examines the main challenges and nuances faced by artificial intelligence in translating Uzbek literary texts into English. Focusing on Shukur Kholmirzaev's short story "The Uzbek character", the study analyzes how linguistic structure, cultural context, and stylistic features affect the quality of AI-generated translations. Using a qualitative analytical method, selected passages from the original Uzbek text are compared with English translations produced or supported by machine translation systems. The findings show that AI tools struggle particularly with Uzbek's agglutinative morphology, flexible word order, and culturally specific expressions. As a result, important meanings, emotional depth, and cultural references are often simplified or lost. The study concludes that while AI translation technologies are useful for preliminary translation, effective literary translation from Uzbek into English still requires human involvement to ensure linguistic accuracy and cultural authenticity.

Introduction

Artificial Intelligence (AI) has greatly improved language translation in recent years. New neural machine translation (NMT) systems, like those integrated into popular tools, can produce fast and fluent translations for many languages. However, when it comes to translating texts from Uzbek to English, AI still faces important challenges because Uzbek has complex linguistic features and cultural expressions that are often difficult to convey properly in English. Uzbek is an agglutinative and low-resource language, meaning it attaches many suffixes to root words (for example, mening, qarindoshlarimiznikiga) and has

limited training data for AI models, which can lead to translation errors. (Nazirova & Usmonova, 2025).

To explore these issues in a real literary context, this article examines the story "The Uzbek Character" by Shukur Kholmirzaev — a narrative rich in cultural detail and expressive language. We aim to show how AI struggles to maintain both linguistic accuracy and cultural meaning when translating such texts. The study highlights specific translation problems through clear examples from the story.

Methodology

This research uses a qualitative analytical approach. First, key linguistic challenges in machine translation from Uzbek to English were identified from scientific literature. These include issues arising from Uzbek's morphology, syntax, idioms, and cultural elements.

Furthermore, passages from "The Uzbek Character" were reviewed. The original Uzbek text was compared with possible English translations (based on available online excerpts and translated versions of the story). Finally, challenges were categorized into linguistic, cultural, and stylistic groups. These categories help in exploring how AI translation tools — which use statistical patterns and neural networks — face difficulties that are not only technical but also semantic and cultural in nature.

Analysis

Linguistic challenges

Uzbek is highly agglutinative, tense, possession, and case are often expressed through long suffix chains attached to root words. For example, in Uzbek the word "kitoblaringizdan" combines the root kitob ("book"), a plural suffix, a possessive suffix, and a case ending ("from your books"). AI systems often struggle to separate these elements correctly, which can lead to translation errors or neutral simplifications. (Nazirova & Usmonova, 2025).

Uzbek typically allows a flexible word order with subject-object-verb (SOV) as the base pattern. AI models trained on fixed word order, languages like English (SVO) sometimes produce awkward sentences because they incorrectly reassemble unfamiliar structures. (Raimberdiyeva, 2024). For example, in Shukur Kholmirzayev's short story "Uzbek character", sentences frequently place the verb at the end to reflect psychological restraint and cultural nuance. Consider the following Uzbek sentence:

Ota bolasini sukut bilan tingladi. Structurally, the sentence follows the SOV pattern: Ota (subject) + bolasini (object) + tingladi (verb).

A correct English translation requires reordering the sentence into the SVO structure: The father listened to his son in silence. However, AI systems that mechanically preserve the original word order may produce an awkward or ungrammatical translation such as: The father his son listened in silence.

This example demonstrates how inadequate syntactic reordering can result in unnatural English output. It highlights the importance of incorporating typological awareness into AI translation models, particularly when translating Uzbek literary texts where word order plays a crucial role in conveying national character and implicit meaning.

Cultural and contextual nuances

Uzbek literary texts contain idioms tied to cultural practices. In “The Uzbek Character”, the protagonist describes rural life — qishloqcha (small village life), kolkhoz (collective farm), and local social behaviors. These terms carry cultural weight. Literal translation of kolkhoz as “a collective farm” may seem accurate, but the emotional and historical connotations related to Soviet-era rural life are often lost in machine outputs.

Scientific literature emphasizes that AI’s literal translation often fails to reflect cultural meaning, so paraphrasing or explanatory techniques are necessary to preserve the source text’s stylistic and semantic depth (Karimova, 2023).

The story shows students’ reaction to rural conditions — lack of doors and windows, simple earthen houses and making comparisons with their own urban background. “Bitta brigadirning bitmay qolgan peshayvonli imoratiga joylashadigan bo‘ldik. Buyam shunchaki somon suvoq qilingan. Deraza-romlari yo‘q. Yer zax. Odatdagi... baraklardan farqsiz edi” (Xolmirzayev, Sh. (2013, November 2). O‘zbek xarakteri (hikoya). Ziyouz). AI translated version: 1. “We were to be accommodated in an unfinished house with a porch belonging to a brigadier. It was merely plastered with straw. There were no window frames. The ground was damp. An ordinary place… no different from the usual barracks.” (OpenAI. (2026). ChatGPT (GPT-5.2)

2. “We were going to be housed in a foreman's unfinished building with a porch. It was just plastered with straw. It had no window frames. The floor was damp. It was no different from the usual barracks.” (OpenAI. (2026). DeepL)

These details are culturally meaningful: they express social comparison and regional identity. Automatic translation may not convey these subtle social meanings because the model does not understand human cultural context — only patterns in training data (Karimova, 2023).

Discussion

The above analysis shows why translating literary Uzbek using AI tools is especially challenging:

Vocabulary scarcity: AI models perform best when the language pair has abundant parallel training data. Uzbek-English pairs often lack large corpora, leading to lower translation quality. (Nazirova & Usmonova, 2025).

Morphological richness: Agglutinative languages like Uzbek generate many word forms, increasing the vocabulary the model must handle. This reduces accuracy unless the model uses robust segmentation (Nazirova & Usmonova, 2025).

Cultural meaning: AI lacks human cultural knowledge, so metaphors, historical references, and emotional expressions are hard to render fully (Raimberdiyeva, 2024).

These challenges underline that AI alone is not enough for high-quality literary translation. Human translators or post-editing is often required to maintain aesthetic and cultural fidelity. This view aligns with current research in translation studies, which states that machine translation tools should be regarded as assistive rather than autonomous solutions, particularly for literary and culturally rich texts (Khamidova, 2025).

Conclusion. In conclusion, AI translation systems have made progress in multilingual communication, but the translation of rich and culturally nuanced literary texts like "The Uzbek Character" remains complex. Uzbek's agglutinative structure, flexible syntax, and culturally specific expressions create linguistic and cultural barriers that AI models — even advanced neural networks — struggle to overcome.

This article has shown that while AI tools can provide rough translations, they often fail to capture deep meanings, subtle emotions, and cultural context. Thus, for literary translation from Uzbek to English, hybrid methods involving human expertise remain essential. These methods improve not only accuracy but also cultural authenticity, ensuring that translated literary works carry the same emotional and narrative impact as the original.

References

1. "Difficulties in Translating Uzbek Phrases into English," International Journal of Artificial Intelligence.
2. Raiimberdiyeva M. N., "Translation Challenges from Uzbek into English," Analysis of Modern Science and Innovation (2025).
3. Nazirova & Usmonova, Advanced NLP AI Tools Importance in Machine Translation from Uzbek to English.
4. Online text of The Uzbek Character (O'zbek xarakteri) by Shukur Kholmirzaev (partial version).
5. Machine Translation in Uzbekistan: Challenges, Advances and Future Directions — Research overview (2025)
6. Khamidova S. B., "Evolution of Computational Linguistics and AI Paradigms in Translation Studies," Oriental Journal of Philology
7. Xolmirzayev, Sh., "O'zbek xarakteri" (2013, November 2)
8. OpenAI. (2026). DeepL
9. OpenAI. (2026). ChatGPT (GPT-5.2)
10. ziyo.uz
11. ResearchGate.net
12. myscience.uz