THE ARTIFICIAL INTELLIGENCE AND THE ARABICTRANSLATION: CHALLENGES, GUIDELINES AND OPPORTUNITIES

DR. MD RAIHAN

Assistant Professor, Department of Arabic, Faculty of Arts, Banaras Hindu University, Varanasi-221005 (UP) INDIA
E-mail: raihanquasmi@gmail.com

Abstract - This study explores the transformative role of Artificial Intelligence (AI) and Computer-Assisted Translation (CAT) tools in improving Arabic translation. It investigates the specific challenges posed by the complexity of Arabic linguistic structures—such as literal translations, semantic ambiguity, and the difficulty of capturing implicit meanings and cultural nuance. The paper emphasizes the importance of integrating AI technologies to enhance translation in literature, technology, law, and other domains, while also underlining the indispensable role of human translators in ensuring linguistic and cultural fidelity.

The research examines the historical development of AI and CAT within translation studies, outlining their definitions, evolution, and professional applications. It highlights how CAT tools have become essential in facilitating translation work, while also identifying the limitations of machine translation in addressing Arabic's lexical, grammatical, and cultural richness. By analysing case studies—including idiomatic expressions and proverbs—the study demonstrates how machine translation often produces inaccurate or literal renderings, while CAT tools and human translators achieve greater contextual and cultural accuracy.

The paper concludes with a set of recommendations: the need for hybrid approaches that combine human expertise with AI, the development of specialized Arabic terminology databases, and enhanced training for translators in using CAT technologies. By strengthening collaboration between human translators and modern AI systems, this research proposes a comprehensive framework for producing accurate, culturally sensitive, and high-quality Arabic translations in an increasingly digital world.

Keywords - Artificial Intelligence, Computer-Assisted Translation, Machine Translation, Translation Accuracy, Lexical Challenges, Cultural Issues.

INTRODUCTION

Amid rapid technological advances, Artificial Intelligence (AI) and Computer-Assisted Translation (CAT) tools represent a paradigm shift in translation and linguistic practice. The Arabic language, with its rich morphology, syntactic flexibility, and cultural depth, presents unique challenges for machine translation systems. Integrating AI technologies into Arabic translation is therefore essential for improving the quality of translated texts across a variety of fields, including literature, technology, and law.

These tools not only increase efficiency but also reshape linguistic workflows, supporting intercultural communication. Yet challenges remain: literal renderings that distort meaning, the inability to convey implicit messages, and difficulties in capturing contextually appropriate translations. Addressing these issues requires clear frameworks to ensure quality and accuracy.

The growing reliance on CAT tools in both academic and professional settings highlights their central role. They are no longer simple aids but integral to translation processes—enabling translators to process large volumes of material quickly while maintaining consistency and accuracy. However, a pressing question persists: how can translators safeguard linguistic and cultural integrity without compromising quality under machine influence?

At the same time, global translation companies continue to invest heavily in intelligent machine translation systems, aiming for more accurate and efficient outcomes. Their success depends on a nuanced understanding of Arabic's linguistic and cultural features, and on striking the right balance between technological reliance and human oversight. This study seeks to contribute by analysing the challenges of translating Arabic texts, exploring both theoretical and applied dimensions, and offering practical recommendations for integrating AI with human expertise.

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