Future of Translation: AI & Human Collaboration

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Abstract:

The advent of Generative Pre-trained Transformer (GPT) models has introduced a paradigm shift in natural language processing (NLP). The release of ChatGPT, a conversational artificial intelligence (AI) based on GPT architecture, has further accelerated interest in leveraging these models for translation purposes. GPT's ability to generate coherent, contextually appropriate text has sparked curiosity about its potential to address longstanding challenges in machine translation. The purpose of this review is to explore the rapidly growing intersection of GPT models and language translation. Analysing 26 articles from five primary databases, the study observes a significant surge in research following the release of ChatGPT.

The review reveals that most studies focus on improving translation quality and accuracy, particularly for European and high-resource languages. Comparisons with traditional neural machine translation (NMT) reveal that GPT-based translations are often comparable to human translations and, in some cases, surpass them. GPT demonstrates strong capabilities in handling complex linguistic elements such as poetry, humour, and cultural nuances, as well as excelling in post-editing and translation reviews. The research highlights the importance of prompt design, with more explicit and detailed cues yielding better outcomes. Despite these advancements, challenges persist, including translation errors, hallucinations, plagiarism, and ethical concerns regarding originality. GPT's performance in low-resource languages remains limited, and its reliance on high-quality prompts underscores the need for further research in prompt engineering.

This study has significant implications for the translation industry and education. It underscores the changing role of human translators, the growing need for co-intelligence, and the transformative potential of GPT models in language translation. GPT models have the potential to complement traditional NMT systems and human translators, enhancing workflows and accessibility to high-quality translations. From an educational perspective, integrating generative AI tools into translator training programmes could reshape the field, equipping future professionals with the skills to collaborate effectively with AI.