

Role of Large Language Models in Advancing Multilingual Text Generation

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Abstract: Large Language Models have significantly transformed the field of natural language processing by enabling efficient and contextually rich multilingual text generation. These models, trained on vast and diverse datasets, utilize deep learning architectures such as transformers to understand, translate, and generate text across multiple languages with improved fluency and accuracy. LLMs facilitate cross-lingual communication, reduce language barriers, and support applications including machine translation, content localization, educational tools, and conversational AI systems. Moreover, they enhance low-resource language representation by transferring linguistic knowledge from high-resource languages. Despite these advancements, challenges remain regarding bias, cultural sensitivity, data imbalance, and computational cost. Ongoing research focuses on improving fairness, efficiency, and inclusivity to maximize the global accessibility and usability of multilingual text generation technologies.

Keywords: Large Language Models, Multilingual Text Generation, Natural Language Processing