Editorial

We bring the first issue of the seventeenth volume of the **International Journal of Computational Linguistics Research** with the following papers.

In the opening paper, "**A Review of Viterbi Algorithm Applications in Pattern Recognition and Language Processing**", the author presented a comprehensive review of the Viterbi algorithm's applications in pattern recognition and natural language processing (NLP). The paper outlines its theoretical foundation as a dynamic programming method that efficiently identifies the most probable sequence of hidden states given observed data. The paper concludes that the Viterbi algorithm is not obsolete but evolving, with ongoing research poised to further extend its utility in intelligent, real-time systems.

In the following paper, "**Integrating AI Speech and Voice Recognition: Advancing Large Language Models with Speech-to-Phoneme and Text Recognition Systems**," the author proposes an interesting Speech-to-Phoneme-to-Text (SPG) framework that integrates speech recognition with Large Language Models (LLMs) via phoneme-level intermediation. The system the author developed comprised four core components: a Speech to Phoneme module, Phoneme to Text (P2G/LLM) module, a Voice Recognition Enhancer and innovative training and inference strategies. This work ultimately enhanced LLMs' ability to process spoken input accurately,

In the final paper, "**Mapping of Cognitive and AI Models for Written Communication,**" the author studied the integration of cognitive science and artificial intelligence to enhance English writing instruction and assessment. It proposed a conceptual framework that aligns human cognitive models with AI architectures through components such as goal representation, memory, attention-based context handling, and feedback-driven revision. The study concluded that hybrid AI-cognitive models enhance writing quality, engagement, and efficiency.

We hope that these papers mark technical elegance and innovative research in computational linguistics.

Editors