CHAPTER 5

Bibliometric Insights into Translation Technology: A CiteSpace Analysis of Web of Science Core Collection Publications (2000-2024)

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Abstract

In the dawn of the 21st century, the advent of innovative translation models has significantly advanced the capabilities of machine translation. This paper aims to conduct a comprehensive bibliometric analysis and visualization of the current landscape of translation technology research. Utilizing the Web of Science (WoS) core collection and employing CiteSpace 6.3.R1 as the analytical tool, this study delves into document citations, authorship patterns, institutional collaborations, and keyword co-occurrence. The findings present a detailed overview of the research from 2000 to 2024, highlighting prominent scholars and institutions, foundational literature, thematic areas, developmental trajectories, and prospective directions in the realm of translation technology.

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innovation in translation technology.

The study also recognizes the challenges and future directions in translation technology, such as the need for data augmentation, addressing gender bias, and the development of robust speech recognition systems for real-time translation applications. The integration of deep learning and attention mechanisms has been identified as a key driver for progress, with applications extending to multimodal representations and neural architecture search.

In conclusion, the field of translation technology is vibrant and continuously evolving, with deep learning and neural networks at its core. The research has become more interdisciplinary, integrating insights from computer science, linguistics, and artificial intelligence. As the field moves forward, it is expected that ongoing advancements will further improve the accuracy, efficiency, and accessibility of translation technologies, potentially transforming the way we communicate and understand languages across the globe.

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