Chapter 19
Analyzing Bibliometrics of AI and Smart Vehicles

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ABSTRACT

This chapter presents a concise bibliometric analysis of the intersection between artificial intelligence (AI) and smart vehicles. Through systematic literature review and analysis, key research trends and themes were identified, including AI-driven autonomous driving, intelligent transportation systems, machine learning algorithms, and human-machine interaction. The analysis highlights the growing interest in the field and identifies influential research works, contributors, and collaborative networks. This bibliometric analysis provides valuable insights into the research landscape and offers directions for future studies in AI and smart vehicles.

INTRODUCTION

The intersection of artificial intelligence and smart vehicles is a rapidly evolving area of research and development. The use of AI in smart vehicles has the potential to revolutionize the automotive industry, making vehicles safer, more efficient, and more convenient for drivers. Some recent studies in this area have focused on the use of AI for driver assistance, autonomous driving, and vehicle-to-vehicle com-

munication. Additionally, there has been research on the ethical and social implications of AI in smart vehicles, including issues related to privacy, security, and liability. The research on artificial intelligence and smart vehicles is ongoing and constantly evolving as new technologies and applications are developed. There are numerous studies in the Scopus database on "Artificial Intelligence and Smart Vehicles." The studies cover a wide range of topics related to AI and smart vehicles, such as autonomous driving, driver behavior analysis, predictive maintenance, intelligent transportation systems, and more. Some recent studies include Wei et al. (2022). This study is a comprehensive survey that explores the current state of research on the use of AI in autonomous vehicles. The authors conducted a systematic review of existing literature on this topic, and they analyzed and summarized the findings. The research method involves collecting data from various sources, including academic papers, conference proceedings, and technical reports. The study concludes that AI plays a critical role in the development of autonomous vehicles, and it is used in areas such as perception, decision-making, and control.

Ding et al. (2021) is a literature review that discusses various AI technologies used in autonomous driving systems and their applications. The authors conducted a systematic review of existing literature on this topic and analyzed and summarized the findings. The research method involves collecting data from various sources, including academic papers, conference proceedings, and technical reports. The study concludes that AI technologies such as machine learning and computer vision are widely used in autonomous driving systems, and they can significantly improve the safety and efficiency of these systems. A review by Pham et al. (2021) is a literature review that reviews recent advances in using machine learning techniques for analyzing driver behavior in smart vehicles. The authors conducted a systematic review of existing literature on this topic and analyzed and summarized the findings. The research method involves collecting data from various sources, including academic papers, conference proceedings, and technical reports. The study concludes that machine learning techniques can effectively analyze driver behavior in smart vehicles, and they can be used to improve safety and driver experience. Nguyen et al. (2021) discusses the use of machine learning for predictive maintenance in smart vehicles and provides a review of recent literature on this topic. The authors conducted a systematic review of existing literature on this topic and analyzed and summarized the findings. The research method involves collecting data from various sources, including academic papers, conference proceedings, and technical reports. The study concludes that machine learning techniques can be used to predict maintenance needs in smart vehicles, and this can improve vehicle reliability and reduce maintenance costs. Elgendy et al. (2021) provides an overview of the various enabling technologies used in intelligent transportation systems, including AI. The authors conducted a systematic review of existing literature on this topic and analyzed and summarized the findings. The research method involves collecting data from various sources, including academic papers, conference proceedings, and technical reports. The study concludes that AI technologies can significantly improve the performance and efficiency of intelligent transportation systems, and they can be used in areas such as traffic prediction, congestion management, and route planning.

Overall, these studies and many others in the Scopus database demonstrate the significant role that artificial intelligence plays in the development of smart vehicles and related technologies. Based on the studies in the Scopus database, it can be concluded that there is a growing interest in the application of artificial intelligence in smart vehicles, particularly in the areas of autonomous driving, driver behavior analysis, predictive maintenance, and intelligent transportation systems. The studies highlight the potential benefits of AI in enhancing the safety, efficiency, and sustainability of smart vehicles. They also discuss the challenges and limitations associated with the adoption of AI in this field, such as the

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