Review of: "EEG-based Emotion Classification using Deep Learning: Approaches, Trends and Bibliometrics"

Ruth Olusegun[1]

1 Bowie State University

Potential competing interests: No potential competing interests to declare.

This is a very sound article that provides insights into the recent developments and trends in Electroencephalography (EEG)-based emotion classification research, with analysis carried out using a deep learning approach. A comprehensive bibliometric analysis of diverse articles within a timeframe conducted in this paper indicates a thorough data-driven approach. The paper showcases the subject's relevance and provides a foundation for emotion classification.

The authors provide a comprehensive review and significant findings of different studies conducted on emotion classification. They also emphasize the effectiveness of electroencephalograms to capture temporal dynamics and provide real-time analysis, as well as its applications in different domains. They mentioned its importance in various fields such as healthcare, psychology, and human-computer interaction; however, a more in-depth discussion of its applications in the domains mentioned, as well as specific case studies, could be more informative.

The authors also reviewed notable publications and advancements in electroencephalography-based emotion classification techniques, leveraging deep learning methods like Convolutional Neural Networks, Recurrent Neural Networks, Attention Mechanisms, Capsule Neural Networks, Ensemble Learning, Spiking Neural Networks, and Multimodal Feature Fusion as used in different experiments for real-time subliminal emotion detection. However, providing a brief explanation and definition of acronyms in the article can ensure more understanding, especially for readers who may not know the terminology. Also, be sure to check the article carefully for repetitions and redundant sentences.

The authors meticulously outlined their research methods for conducting bibliometric analysis based on the dataset collected from the Scopus database and the comparative review conducted. However, the review does not delve into the specific tools for analysis. Though authors mention the utilization of R-Studio as the analysis tool for visualization and mention keywords related to deep learning in the search strategy, the provided article did not explicitly describe the specific deep learning and statistical approaches employed in the analysis.

The results of their findings were explicitly stated. Their results identified the significant increase in research and interest in emotion classification, with the authors with the highest local citations contributing to the scientific community. In addition, the top countries contributing to the field, and the emerging sources that are highly relevant and influential in the field of emotion classification were properly analyzed.

Overall, this is a very useful article that provides insights into the growing research view. It offers valuable information for researchers to understand the field broadly, identify key contributor sources, emerging trends, and advances in emotion

classification research.