Qeios

Peer Review

Review of: "Synthetic Data Generation of Body Motion Data by Neural Gas Network for Emotion Recognition"

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This research represents a solid, original, and promising scientific contribution to the field of generating body motion data for emotion recognition. It presents the Neural Gas Network (NGN) model as an effective mechanism for generating high-quality and diverse synthetic data. The research covers all stages of the experiment, from dataset preparation and sample selection to analysis of the results across a wide range of scientific metrics.

Comparative experiments with other advanced generative models demonstrate the superiority of NGN. The methodology is rigorous and organized, and the discussion related to the research questions (RQ1–RQ5) is clearly interconnected with the results, highlighting the factors affecting the quality and generalizability of generative data.

The research adheres to ethical principles and transparency, using anonymous and open-access data, with clear licensing and reference to public repositories for the code and dataset. The conclusion provides a clear vision of potential practical applications, such as real-time emotion recognition, healthcare, and customer service, with future suggestions for expanding the dataset, improving computational efficiency, and studying the ethical implications of synthetic data.

Based on the above, the research can be evaluated as highly distinguished in terms of scientific originality, robust methodology, rigorous experiments, analysis of results, and compliance with ethical standards for scientific research. It constitutes an important and reliable addition to the modern literature on emotion recognition through body movement data.

I extend my sincere thanks to the researcher for his outstanding efforts in preparing this scientific research, which reflects precise analysis and distinguished methodological organization. I wish the researcher continued progress and development, and to enrich science with knowledge and experience.

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Declarations

Potential competing interests: No potential competing interests to declare.