Review of: "Multivariate Time-Series Data Generation in Generative Adversarial Networks"

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Potential competing interests: No potential competing interests to declare.

The article "Multivariate Time-Series Data Generation in Generative Adversarial Networks" suggests a novel method for generating time-series data using unsupervised GANs. The authors address the issue of limited availability of real-world time-series data and demonstrate the effectiveness of their approach in generating realistic intrusion detection data from the CIC-IDS2017 dataset.

The introduction provides an adequate background on time-series data and its applications, along with the limitations of existing approaches in dealing with real-time scenarios. The authors explain the deep learning techniques used to generate time-series data, particularly GANs, and mention previous works that have used GANs for sequence or time-series data.

The authors offer a detailed explanation of their proposed approach, including the use of a feedback mechanism to enhance GAN's performance. They also present a thorough evaluation of their approach using different experimental configurations.

However, there are some areas of improvement. Firstly, the abstract's clarity could be improved, and the language used could be more concise. Secondly, the methodology section lacks detail, particularly in the architecture of the GAN and the hyperparameters used. More information about these aspects would allow for better replication and comparison with other approaches. Additionally, the authors could provide more information on the limitations and potential drawbacks of their approach, particularly in terms of the generalizability of the generated data to other datasets or real-world scenarios.

Overall, the article presents a promising approach to generating time-series data using GANs and provides a thorough evaluation of its effectiveness. However, more detail on the methodology and potential limitations could enhance the article's impact and contribution to the field.