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Reproducibility Probability-Based Approaches for Estimating True Proportions of Positive Studies

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Introduction

Normalization is the process of creating shifted and scaled versions of statistics with the goal of eliminating the effects of certain gross influences, like in an anomaly time series, by comparing the corresponding normalized values of different datasets (heterogenic data). As a result, the procedure for heterogeneous data transformation brings all attributes to the same scale. Indeed, the decimal scaling method is one of the quantitative data normalization techniques that move the decimal point of the data's values. We divide each data value by the maximum absolute to normalize the data using this method. The original data are subjected to linear transformation in the Minimum-Maximum (Min-Max) data normalization method, whereas in the z-score data normalization procedure, values are normalized using the mean and standard deviation parameters. On the basis of these evidences, quantitative data standardization and normalization procedures may have distinct parametric distribution, such as the normal distribution, and data variability reduction capabilities [1].

Description

Another benefit of big data analytics is the ability to optimize business operations. By analyzing data from various sources such as supply chain, logistics, and manufacturing processes, businesses can identify areas of inefficiency and make improvements. This can lead to cost savings, improved productivity, and faster time to market. Big data analytics can also be used to gain insights into market trends and competitive intelligence. By analyzing data from various sources such as industry reports, competitor data, and customer feedback, businesses can stay ahead of the curve and identify new opportunities for growth. One challenge that businesses face with big data analytics is managing and processing large volumes of data. This is where technologies such as Hadoop and Spark come in. These technologies enable businesses to store and process large volumes of data in a cost-effective manner [2,3].

The same survey displayed smaller bias transformation by using the Box-Cox transformation as opposite to logarithm transformation. The same study revealed that the mean squared error of estimation is smaller with the Box-Cox transformation; and as well, the Box-Cox transformation leads to systematically higher estimated values than logarithmic transformation. Hence, the Box-Cox transformation should be considered as a viable alternative in statistical modelling if the transformation of variables is required. Low aptitude with regard exponential and inverse data transformation in reducing data variability as well as in adjusting data normality could be due to processed positive value of analysed data. Indeed, our analysis suspected exponential data transformation as a potential source of transformed data variability [4].

Conclusion

Big data analytics has become an essential tool for businesses looking to gain insights into their operations and gain a competitive advantage in the marketplace. By leveraging the power of big data analytics, businesses can gain valuable insights into customer behavior, optimize their operations, and stay ahead of the curve in terms of market trends and competitive intelligence. With the right technology and expertise, businesses of all sizes can harness the power of big data analytics and unlock its full potential.

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Conflict of Interest

The authors declare that there was no conflict of interest in the present study.

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