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Implementation of data normality testing as a microsoft excel® library function by kolmogorov-smirnov goodness-of-fit statistics

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Abstract

This paper deliberates on the implementation of data Normality test as a library function in Microsoft Exel® spreadsheet software, in which researchers normally stores data for anlysis and processing, by Kolmogorov-Smirnov goodness-of-fit statistics. The implementation procedure followed algorithmic program development of the Normality Kolmogorov-Smirnov D statistics for the one-sided and the twosided test criteria as a library function in the Microsoft Excel® environment. For this, the Visual Basic for Applications was employed for deploying macro embedment in the spreadsheet software. Successful implementation of the Normality K-S D statistics fosters the development of the Normality K-S p-value estimation procedure also as a library function in the Ms Excel® environment. Tests of these implementations bear potency of accurate, speedy and economical procedure for undertaking Normality testing in research, for data of up to sample size $n \leq 2000$.

Index Keywords

Application programs, Competition, Information management, Macros, Probability distributions, Sampling, Spreadsheets, Visual BASIC; Estimation procedures, Goodness-of-fit statistics, Kolmogorov-Smirnov, Library functions, Machine precision, Sampling distribution, Spreadsheet software, Visual basic for applications; Software testing