PRANAV-POWER SERIES DISTRIBUTION FOR MODELLING SURVIVAL AND WAITING TIMES DATA

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SUMMARY

In this article, we introduce a new Pranav power series (PPS) class of distributions which is obtained by compounding one parameter Pranav and power series distributions. The new distribution contains several important lifetime models. Various properties of the distribution are investigated including closed-form expressions for the density function, cumulative distribution function, survival function, hazard rate function, the moments of order statistics and MLEs. Finally, two data applications are given showing flexibility and potentiality of the PPS distribution.

Keywords and phrases: Multivariate normal and Student-t distributions; matrix normal, matrix gamma and matrix T distributions; matrix integration; invariant differentials; uniform prior; and prediction distribution.

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