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Integrated quadrbly reduced additive weighted mixture poisson distribution

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We propose a new family of probability distributions derived from the mixtures of weighted Poisson probability distributions. This family of distributions will overcome some of the potential limitations suffered by the existing dominant distributions including lack of modeling over-dispersion, under-dispersion and bimodality. The family is flexible and could be applied to a variety of problems from different disciplines like business, finance, medicine and reliability in engineering. To construct this family, a baseline Poisson distribution and a number of reasonable weights are chosen to get weighted versions of the baseline distribution. These distributions are combined into a mixture format that sums up to a single component probability distribution in a closed form. The resulted density function will be parsimonious and flexible and will be able to capture the nature of many count data patterns. Real count data will be used and goodness-of-fit statistical techniques will be developed to compare its performance with the other existing competing models.

Biography

Mohamed Yusuf Hassan has completed his PhD from University of California, Riverside. He is the first Author of bivarivarite Mixture Transition Distribution and the Bimodal Skew-Symmetric Normal.

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