

Inference for the Discrete Stable Distribution with the Probability Generating Function

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We develop a method to estimate the two parameters of the discrete stable distribution. By minimizing the quadratic distance between transforms of the empirical and theoretical probability generating functions, we obtain estimators simple to calculate, asymptotically unbiased and normally distributed. We also derive the expression for their variance-covariance matrix. We simulate several samples of discrete stable distributed datasets with different parameters, to analyze the effect of truncation on the right tail of the distribution.