Beta Distr:-

Shape of Beta Distr

Shape of beta distr depend upon the value of α & β if "$\alpha = \beta$" then shape will be "Symmetric" if "$\beta > \alpha$" then "+ively skewed" & if "$\beta < \alpha$" then "-ively skewed"

$\alpha = \beta \rightarrow$ Symmetric

$\beta > \alpha \rightarrow$ +ively skewed

$\beta < \alpha \rightarrow$ -ively skewed

$\beta < 1 \rightarrow$ U-Shaped

$\alpha < 1$

if $\beta < 1$ & $\alpha > 1$ or $\beta > 1$ & $\alpha < 1$ → J-Shaped.

Application:-

When there is

(1) It is natural candidate for modeling engining ratio. e.g efficiency measure which vary over the unity range

(2) It has wide application r.v that have finite range that is from a to b.

3) It is frequently used as a prior dist^n for binomial ~~dist^n~~ proportions in Basian analysis.

4) It can also be use as method of elicitation in Basian analysis. (find out α & β)

5) It is widely used in many areas of operation research.

The Seach shows the application of beta alist^{n} in following fields.

(i) Risk analysis for strategic planning, finace & marketing engineering simmulation

(ii) Modeling hydrology variable

(iii) Logarithm of aerosol si

(iv) Activity time in pert analysis

(v) Sea-state reflectivity

(vi) Traffic flow construction olvations

(vii) Isolation data in photo valetic system analysis

(viii) Variables effective reproductivity of cows