Package ‘uskewFactors’

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Type Package
Title Model-Based Clustering via Mixtures of Unrestricted Skew-t Sactor Analyzer Models
Version 2.0
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Description Implements mixtures of unrestricted skew-t factor analyzer models via the EM algorithm.
Depends tmvtnorm, mvtnorm, MCMCpack, MASS, stats
License GPL (>= 2)
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Swiss Banknote Data The Swiss Banknote Data

Description
This package contains measurements on 200 Swiss banknotes: 100 genuine and 100 counterfeit. The variables are length of bill, width of left edge, width of right edge, bottom margin width and top margin width. All measurements are in millimetres. The data source is noted below. This data is also available in the alr package in R.
Usage

data(banknote)

References


Examples

data(banknote) # Loads the brown bread data set
head(banknote) # Displays the first six rows of the brown bread data set

uskewFA

Mixtures of 'Unrestricted' Skew-t Factor Analyzers via the EM algorithm

Description

Fits a mixture of 'unrestricted' skew-t factor analyzers via the EM algorithm for estimation of model parameters

Usage

uskewFA(x, G, q, init=1, max.it=100)

Arguments

x A numeric matrix.
G The number of mixture components to fit.
q The number of latent factors.
init This number controls the starting values that are used: (1) k-means, or (2) random.
max.it The maximum number of iterations of the EM algorithm.

Value

map A vector of the maximum a posteriori group memberships.
bic The value of the Bayesian Information Criterion.
zhat The matrix of estimated probabilities of group membership.
likelihood A vector containing the value of the complete-data log-likelihood computed at each iteration of the EM algorithm.
Note

This package contains measurements on 200 Swiss banknotes: 100 genuine and 100 counterfeit. The variables are length of bill, width of left edge, width of right edge, bottom margin width and top margin width. All measurements are in millimetres. The data source is noted below.

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References


See Also


Examples

data("banknote")
x=banknote[,c(5,6)]
# We let max.it=3 for a speedy illustration.
# More iterations are needed to ensure
# convergence.
results=uskewFA(x,G=2,q=1,max.it=3)
results

uskewFactors  Model-Based Clustering via Mixtures of 'Unrestricted' Skew-t Factor Analyzers

Description

Contains the function uskewFA for fitting mixtures of 'unrestricted' skew-t factor analyzer models

Details

Package: uskewFactors
Type: Package
Version: 2.0
Date: 2016-05-20
License: WGPL (>=2)
Author(s)
Paula M. Murray, Ryan P. Browne, and Paul D. McNicholas
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References

See Also
Details, references, and examples are given under uskewFA.
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