Package SpQN

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Title Spatial Quantile Normalization

Version 1.0

Description The SpQN package contains the function to normalize the local distribution in a matrix. Specifically, the SpQN package contains the function to approximate the local distribution and trasformed them to the target distribution. SpQN approximated the local distribution by binnning the matrix into disjoint bins, and using empirical distribution of larger bins to approximate the distribution of disjoint bins. The quantile normalization was used to map the disjoint bins to target bin. After normalization, the local distribution are approximately the same.

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Encoding UTF-8

LazyData true

RoxygenNote 7.0.2

R topics documented:

`normalize_correlation` *Spatial Quantile Normalization*

Description

The normalize_correlation function allows users to normalize the correlation matrix, such that the local distributions of the correlations are approximately the same.

Usage

```
normalize_correlation(cor_mat, ngrp, size_grp, ref_grp)
```

Arguments

`cor_mat`	Matrix, correlation matrix, generated by sorted expression matrix
`ngrp`	Integer, number of bins to use in the normalization
`size_grp`	Integer, size of large bin
`ref_grp`	Integer, the location of reference bin that represents target distribution

Value

The normalized correlation matrix

Examples

```
a=rnorm(10000)
b=a/max(abs(a))
cor_ori=array(b,dim=c(100,100))
normalize_correlation(cor_ori,ngrp=10,size_grp=15,ref_grp=9)
```

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