

Package ‘RnavGraphImageData’

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Type Package

Title Some image data used in the RnavGraph package demos

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URL <http://www.navgraph.com>

Description Image data used as examples in the RnavGraph R package.
See the demos in the RnavGraph package.

Depends R (>= 2.10.0)

Suggests RnavGraph

License GPL-2

NeedsCompilation no

Repository CRAN

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binaryalphadigits *Binary Alphadigits*

Description

Binary 20x16 digits of "0" through "9" and capital "A" through "Z". 39 examples of each class.

From Simon Lucas' (sml@essex.ac.uk), Algoval system.

Usage

binaryalphadigits

Format

Data frame with one image per row.

Source

<http://www.cs.nyu.edu/~roweis/data.html>

digits *USPS Handwritten Digits*

Description

8-bit 16x16 grayscale images of "0" through "9"; 1100 examples of each class.

Usage

digits

Format

Data frame with one image per column.

Source

<http://www.cs.nyu.edu/~roweis/data.html>

faces

Olivetti Faces

Description

Grayscale faces 8 bit [0-255], a few images of several different people.

400 total images, 64x64 size.

From the Olivetti database at ATT.

Usage

faces

Format

Data frame with one image per column.

Source

<http://www.cs.nyu.edu/~roweis/data.html>

frey

Frey Face

Description

From Brendan Frey. Almost 2000 images of Brendan's face, taken from sequential frames of a small video. Size: 20x28.

Usage

frey

Format

Data frame with one image per column.

Source

<http://www.cs.nyu.edu/~roweis/data.html>

L2Distance

Euclidean distances between vector in A and B

Description

This fully vectorized (VERY FAST!) m-file computes the Euclidean distance between two vectors by:

$$\|A-B\| = \text{sqrt} (\|A\|^2 + \|B\|^2 - 2*A.B)$$

Usage

```
L2Distance(a, b, df = 0)
```

Arguments

a	Either a matrix or a vector.
b	Either a matrix or a vector.
df	df = 1, force diagonals to be zero; 0 (default), do not force.

Value

For A - (DxM) matrix B - (DxN) matrix
L2Distance returns a matrix of size (MxN).

Note

This function was transcribed by the package maintainers from a Matlab to an R function.

Author(s)

Roland Bunschoten

Examples

```
A = matrix(runif(400*100),ncol=100)
B = matrix(runif(400*200),ncol=200)

d = L2Distance(A,B)
```

ordalphadigits	<i>Dissimilarity object of class 'isomap' for Binary Alphadigits data</i>
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Description

Dissimilarity object of class 'isomap'. Returned from:
isomap(vegdist(binaryalphadigits), k=6).

Usage

```
ordalphadigits
```

Format

Object of class 'isomap'.

ordfrey	<i>Dissimilarity object of class 'isomap' for Frey Faces data</i>
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Description

Dissimilarity object of class 'isomap'. Returned from:
isomap(vegdist(t(frey), method="euclidean"), k = 12, ndim=6, fragmentedOK = TRUE)

Usage

```
ordfrey
```

Format

Object of class 'isomap'.

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