Package 'RnavGraphImageData'

October 12, 2022

Type Package

Title Image Data Used in the Loon Package Demos

Version 0.0.4

Description Image data used as examples in the loon R package.

URL <http://waddella.github.io/loon/>

Depends R (>= 2.10.0)

License GPL-2

NeedsCompilation no

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R topics documented:

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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>

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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 Oivetti 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|| = 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)
```

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ordalphadigits	*Dissimilarity object of class 'isomap' for Binary Alphadigits data*

Description

Dissimilarity object of class 'isomap'. Returned from:

```
isomap(vegdist(binaryalphadigits), k=6).
```

Usage

```
ordalphadigits
```

Format

Object of class 'isomap'.

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ordfrey	*Dissimilarity object of class 'isomap' for Frey Faces data*

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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