

# Package ‘readmnist’

August 2, 2018

**Type** Package

**Title** Read MNIST Dataset

**Version** 1.0.6

**Author** Jiang Junfeng

**Maintainer** Jiang Junfeng <a412133593@gmail.com>

**Description** You can use the function `Read.mnist()` to read data and arrange them properly from MNIST dataset (the open handwriting digit database <<http://yann.lecun.com/exdb/mnist/>>). With this package, you can conveniently get all of necessary informations and then immediately start to check whether your machine learning algorithm works well. It can automatically recognize the type of dataset and returns the informations in corresponding structure.

**License** GPL

**Encoding** UTF-8

**LazyData** true

**NeedsCompilation** no

**Repository** CRAN

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readmnist-package      *Read MNIST Dataset*

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## Description

You can use the function `Read.mnist()` to read data and arrange them properly from MNIST dataset (the open handwriting digit database <<http://yann.lecun.com/exdb/mnist/>>). With this package, you can conveniently get all of necessary informations and then immediately start to check whether your machine learning algorithm works well. It can automatically recognize the type of dataset and returns the informations in corresponding structure.

## Details

The DESCRIPTION file:

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Read.mnist          Read MNIST Dataset
readmnist-package   Read MNIST Dataset
```

~~ An overview of how to use the package, including the most important ~~ functions ~~

## Author(s)

Jiang Junfeng  
 Maintainer: Jiang Junfeng <a412133593@gmail.com>

## References

<https://stackoverflow.com/questions/21521571/how-to-read-mnist-database-in-r>

## Examples

```
Info <- Read.mnist(system.file("exdata/t10k-labels.idx1-ubyte", package="readmnist"))
```

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Read.mnist	<i>Read MNIST Dataset</i>
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**Description**

read and arrange informations from MNIST dataset.

**Usage**

```
Read.mnist(filename)
```

**Arguments**

filename            filename of a MNIST dataset (example: "t10k-images.idx3-ubyte")

**Details**

It will return a list (Info) including all necessary informations. If it's a label file, Info will contain : \$magic\_number \$labels \$number \$mark(the style of dataset); If it's a image file, Info will contain : \$ magic\_number \$pic(each row is a image) \$nrow \$ncol \$number \$mark(the style of dataset); And if it's other invalid file, Info will be empty, and the function will print error messages.

**Value**

magic_number	the magic_number of file
labels	the labels information from the dataset(if it's a label file)
pic	the images from the dataset, and each row is one image.(if it's a image file)
nrow	the height of a image(if it's a image file)
ncol	the width of a image(if it's a image file)
number	the number of the dataset
itemmark	the remark of the Info

**Author(s)**

Jiang Junfeng

**References**

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**Examples**

```
Info <- Read.mnist(system.file("exdata/t10k-labels.idx1-ubyte", package="readmnist"))
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