Package 'sparsio'

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Type Package

Title I/O Operations with Sparse Matrices

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Maintainer Dmitriy Selivanov <selivanov.dmitriy@gmail.com>

Encoding UTF-8

Description Fast 'SVMlight' reader and writer.
'SVMlight' is most commonly used format for storing
sparse matrices (possibly with some target variable) on disk.
For additional information about 'SVMlight' format see <http://svmlight.joachims.org/>.

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Depends R (>= 3.1.0), methods

Imports Rcpp (>= 0.12.0), Matrix (>= 1.1)

LinkingTo Rcpp

Suggests testthat

URL https://github.com/dselivanov/sparsio

BugReports https://github.com/dselivanov/sparsio/issues

RoxygenNote 6.1.1

NeedsCompilation yes

Author Dmitriy Selivanov [aut, cre],
Felix Riedel [aut]

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Contents

svmlight *Fast svmlight reader and writer*

Description

Reads and writes svmlight files. Notice that current implementation **can't handle comments in svmlight files** during reading.

Usage

```
read_svmlight(file, type = c("CsparseMatrix", "RsparseMatrix",
  "TsparseMatrix"), zero_based = TRUE, ncol = NULL)

write_svmlight(x, y = rep(0, nrow(x)), file, zero_based = TRUE)
```

Arguments

file	string, path to svmlight file
type	target class for sparse matrix. CsparseMatrix is default value because it is main in R's Matrix package. However internally matrix first read into RsparseMatrix and then coerced with as() to target type. This is because smvlight format is essentially equal to CSR sparse matrix format.
zero_based	logical, whether column indices in file are 0-based (TRUE) or 1-based (FALSE).
ncol	number of columns in target matrix. NULL means that number of columns will be determined from file (as a maximum index). However it is possible that user expects matrix with a predefined number of columns, so function can override inherited from data value.
x	input sparse matrix. Should inherit from Matrix::sparseMatrix.
y	target values. Labels must be an integer or numeric of the same length as number of rows in x.

Examples

```
library(Matrix)
library(sparsio)
i = 1:8
j = 1:8
v = rep(2, 8)
x = sparseMatrix(i, j, x = v)
y = sample(c(0, 1), nrow(x), replace = TRUE)
f = tempfile(fileext = ".svmlight")
write_svmlight(x, y, f)
x2 = read_svmlight(f, type = "CsparseMatrix")
identical(x2$x, x)
identical(x2$y, y)
```

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