Package 'RVowpalWabbit'

Title R Interface to the Vowpal Wabbit

Version 0.0.18

Date 2023-01-07

Maintainer Dirk Eddelbuettel <edd@debian.org>

Author Dirk Eddelbuettel

Description The 'Vowpal Wabbit' project is a fast out-of-core learning
system sponsored by Microsoft Research (having started at Yahoo! Research)
and written by John Langford along with a number of contributors. This R
package does not include the distributed computing implementation of the
cluster/ directory of the upstream sources. Use of the software as a network
service is also not directly supported as the aim is a simpler direct call
from R for validation and comparison. Note that this package contains an
embedded older version of 'Vowpal Wabbit'. The package 'rvw' at the GitHub
repo <https://github.com/rvw-org/rvw-legacy> can provide an alternative using
an external 'Vowpal Wabbit' library installation.

Depends R (>= 2.12.0)

Imports Rcpp

LinkingTo Rcpp

SystemRequirements The Boost 'program_options' library
<https://boost.org> is required.

OS_type unix

License GPL (>= 2)

URL https://vowpalwabbit.org/,

https://github.com/eddelbuettel/rvowpalwabbit

BugReports https://github.com/eddelbuettel/rvowpalwabbit/issues

NeedsCompilation yes

Repository CRAN

Date/Publication 2023-01-08 09:10:02 UTC

R topics documented:

---

vw	*Run the Vowpal Wabbit fast out-of-core learner*

Description

The vw function applies the Vowpal Wabbit on-line learner to a given data set and model.

Vowpal Wabbit is a project sponsored by Yahoo! Research and led by John Langford.

At present, this package provides a simple yet crude interface.

Usage

```
vw(args, quiet=TRUE)
```

Arguments

args	A character vector containing the same arguments one would use on the command-line with the standalone vw binary.
quiet	A boolean switch which, if set, suppresses most output to stdout.

Details

Vowpal Wabbit is a very fast on-line machine learning application. Some documentation for it is provided via the upstream wiki referenced below.

Value

The vw returns a small data.frame with a number of summary statistics function returns a character string of a fixed length containing the requested digest of the supplied R object. For MD5, a string of length 32 is returned; for SHA-1, a string of length 40 is returned; for CRC32 a string of length 8.

Note

The **RVowpalWabbit** package contains the original test and validattion data, models, and output. In order to call the vw function with relative path names (as in the Vowpal Wabbit documentation), it is easiest to first change to a directory above all these files as for example via

```
## change to 'test' directory of package
setwd( system.file("test", package="RVowpalWabbit") )
```

which computes where the package is installed, and then adds the test directory to that path before changing to working directory to the resulting path.

Author(s)

Dirk Eddelbuettel <edd@debian.org> for the R interface; John Langford along with Daniel Hsu, Nikos Karampatziakis, Olivier Chapelle, Paul Mineiro, Matt Hoffman, Jake Hofman, Sudarshan Lamkhede, Shubham Chopra, Ariel Faigon, Lihong Li, Gordon Rios, and Alex Strehl for Vowpal Wabbit.

References

https://github.com/VowpalWabbit/vowpal_wabbit/wiki

Examples

```
## also see demo(vw) from which this is a subset

library(RVowpalWabbit)

# Test 3: without -d, training only
# {VW} train-sets/0002.dat    -f models/0002.model
test3 <- c("-t", system.file("test", "train-sets", "0002.dat", package="RVowpalWabbit"),
           "-f", file.path(tempdir(), "0002.model"),
           "--cache_file", file.path(tempdir(), "0002.cache"))

res <- vw(test3)
res
```

Index