

Package: weatherStats (via r-universe)

October 21, 2026

Title Airport Weather Station Statistics

Version 0.1

Description Download daily weather data recorded at airport weather stations using the National Centers for Environmental Information (NCEI) API

<<https://www.ncei.noaa.gov/support/access-search-service-api-user-documentation>>.

Depends R (>= 3.5.0)

License GPL (>=3)

RoxygenNote 7.3.3

LazyData true

Repository <https://pdhoff.r-universe.dev>

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c2f	<i>C to F temperature conversion</i>
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Description

Celsius to Fahrenheit temperature conversion

Usage

c2f(x)

Arguments

x temperature in Celsius

Value

temperature in Fahrenheit

Author(s)

Peter Hoff

f2c	<i>F to C temperature conversion</i>
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Description

Fahrenheit to Celsius temperature conversion

Usage

f2c(y)

Arguments

y temperature in Fahrenheit

Value

temperature in Celsius

Author(s)

Peter Hoff

isMonth	<i>Month-specific date extraction</i>
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Description

Extract indices of a particular month from ISO 8601 format

Usage

```
isMonth(dates, month)
```

Arguments

dates	a vector of character dates in ISO 8601 format
month	an integer from 1 to 12

Value

a vector of matching indices

Author(s)

Peter Hoff

RDU	<i>RDU weather dataset</i>
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Description

Two years of weather data at RDU.

Usage

```
RDU
```

Format

A data frame with dates along the rows, variables along the columns.

Source

Derived from original data at <https://example.org>

SEA	<i>SEA weather dataset</i>
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Description

One year of weather data at SEA.

Usage

SEA

Format

A data frame with dates along the rows, variables along the columns.

Source

Downloaded via the NCEI API <<https://www.ncei.noaa.gov/support/access-search-service-api-user-documentation>>.

tpdata	<i>Temperature and precipitation data</i>
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Description

Extract and combine temperature and precipitation data

Usage

```
tpdata(...)
```

Arguments

... either a list or sequence of data matrices obtained from ‘weatherStats’

Value

a data frame

Author(s)

Peter Hoff

Examples

```
W<-tpdata(RDU,SEA)

colnames(W)
dim(W)

tpplot(W)
```

tpplot	<i>Temperature and precipitation plot</i>
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Description

Plot temperature and precipitation data

Usage

```
tpplot(TPDATA, units = "F", rc = "col")
```

Arguments

TPDATA	A data frame with temperature and precipitation data
units	"F" or "C"
rc	make multiple plots along columns ("col") or rows ("row")

Value

Invisibly returns NULL.

Author(s)

Peter Hoff

Examples

```
W<-tpdata(RDU,SEA)

colnames(W)
dim(W)

tpplot(W)
```

weatherStats*Weather Station Statistics*

Description

Download weather data from the National Centers for Environmental Information (NCEI) using their API.

Usage

```
weatherStats(  
  FAAID,  
  year = NULL,  
  startDate = NULL,  
  endDate = NULL,  
  trimNA = TRUE,  
  maxTries = 5,  
  tpause = 3,  
  verbose = TRUE  
)
```

Arguments

FAAID	Federal Aviation Administration (FAA) station ID
year	year for which data are to be downloaded
startDate	start date in YY-MM-DD format
endDate	end date in YY-MM-DD format
trimNA	remove days with no data
maxTries	maximum number of query attempts to the NCEI server
tpause	time in seconds to pause between API requests
verbose	a logical value indicating whether to report download progress

Value

a data frame with daily weather data

Author(s)

Peter Hoff

Examples

```
RDU<-weatherStats("RDU",startDate="2024-01-01",endDate="2025-12-31")  
SEA<-weatherStats("SEA",year=2025)
```

```
dim(RDU)  
dim(SEA)  
colnames(SEA)
```

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