Package 'christmas'

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Type Package

Title Generation of Different Animated Christmas Cards

Version 1.4.0

Depends R (>= 4.1)

Imports animation (>= 2.7), grDevices, graphics, stats, methods

Suggests testthat

Description Generation of different Christmas cards, most of them being
animated. Most of the cards can be generated in three languages (English,
Catalan and Spanish). The collection started in 2009.

License GPL-2

URL https://sites.google.com/view/josebarrera/

Encoding UTF-8

RoxygenNote 7.3.2

NeedsCompilation no

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xmascaganer   *Caganer.*

Description

A Catalan 'caganer' (2009 card). Caganer is a figurine depicted in the act of defecation appearing in nativity scenes in Catalonia and neighbouring areas with Catalan culture such as Andorra, Valencia, and Northern Catalonia (in southern France). It is most popular and widespread in these areas, but can also be found in other areas of Spain (Murcia), Portugal, and southern Italy (Naples). Further details can be found at https://en.wikipedia.org/wiki/Caganer. This caganer won the annual contest of sustainable caganers at CREAL (now ISGlobal, https://www.isglobal.org/en/) in 2009.

Usage

```
xmascaganer(
  year = 2010,
  language = c("english", "spanish", "catalan"),
  seed = NULL
)
```

Arguments

year	Year to be printed. Default is 2010.
language	Language to be used in the card. One of c("english","spanish", "catalan"). Default is "english".
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot with a caganer.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmascaganer()
```

---

xmasepitree	*Christmas epitree.*

Description

A statistical/epidemiological Christmas tree (2016 card). This tree is built using a random subset of statistical and epidemiological words.

Usage

```
xmasepitree(year = 2017, seed = NULL)
```

Arguments

year	Year to be printed. Default is 2017.
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including a tree made of nice words.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmasepitree()
```

---

xmasflag	*Christmas flag.*

Description

Christmas flag (2015 card). A flag with a Christmas message.

Usage

```
xmasflag(
  year = 2016,
  language = c("english", "spanish", "catalan"),
  seed = NULL
)
```

Arguments

year	Year to be printed. Default is 2016.
language	Language to be used in the card. One of c("english","spanish", "catalan"). Default is "english".
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including a message in a flag.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmasflag(year = 2020, language = "catalan")
```

---

  xmasfractaltree   *Fractal Christmas tree.*

Description

The tree fractal structure was adapted from (https://blogs.sas.com/content/iml/2012/12/14/a-fractal-christmas-tree.html). A preliminary translation to R was written by Alejandra Cabana (UAB).

Usage

```
xmasfractaltree(year = 2025, language = c("english", "spanish", "catalan"))
```

Arguments

year	Year to be printed. Default is 2025.
language	Language to be used in the card. One of c("english", "spanish", "catalan"). Default is "english".

Value

A Christmas card plot including a fractal Christmas tree.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmasfractaltree()
```

---

xmasgalton	*Christmas Galton card.*

Description

Christmas Galton card (2018). A Christmas tree in the Galton board. This is an adaptation of quincunx() in package animation, which simulates the Galton board (https://en.wikipedia.org/wiki/Bean_machine).

Usage

```
xmasgalton(
  year = 2019,
  language = c("english", "spanish", "catalan"),
  balls = 240,
  layers = 15,
  onlyBoard = FALSE,
  treeballs = 15,
  time = 0.02,
  seed = NULL
)
```

Arguments

year	Year to be printed. Default is 2019.
language	Language to be used in the card. One of c("english","spanish", "catalan"). Default is "english".
balls	The number of balls in the board. Default is 240.
layers	The number of layers in the board. Default is 15.
onlyBoard	Logical. If FALSE (default), an empirical Christmas normal tree estimated from data is added to the histogram.
treeballs	The number of balls to be added to the Christmas normal tree. Default is 15.
time	Elapsed time, in seconds, between two consecutive balls in the board. Default is 0.02.
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas tree in a Galton board.

Author(s)

Jose Barrera-Gomez.

Examples

```
# more balls, less layers:
xmasgalton(balls = 300, layers = 9, time = 0.01)
# no balls in the gaussian christmas tree:
xmasgalton(balls = 400, layers = 11, time = 0.005, treeballs = 0)
```

---

xmashealth   *Christmas risks.*

Description

Christmas risks (2011 card). Some epidemiological jokes about potential effects of Christmas on health.

Usage

```
xmashealth(year = 2012, seed = NULL)
```

Arguments

year   Year to be printed. Default is 2012.

seed   Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including boxplots and OR estimates.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmashealth()
```

---

xmashelix   *Christmas helix.*

Description

Christmas helix (2023 card). A helix with a Christmas message.

Usage

```
xmashelix(
  year = 2024,
  language = c("english", "spanish", "catalan"),
  totalsecs = NULL,
  seed = NULL
)
```

Arguments

year	Year to be printed. Default is 2024.
language	Language to be used in the card. One of c("english","spanish", "catalan"). Default is "english".
totalsecs	Approximate total time, in seconds, to create the card. Default is NULL (and it is internally set).
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including a message in a helix.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmashelix(year = 2024, language = "catalan", totalsecs = 1)
```

---

xmasneon   *Neon Christmas card.*

Description

Christmas card using a neon sign (2013 card). It only works for wishing 2014.

Usage

```
xmasneon(
  language = c("english", "spanish", "catalan"),
  nflash = 30,
  pause = 0.1,
  seed = NULL
)
```

Arguments

language	Language to be used in the card. One of c("english","spanish", "catalan"). Default is "english".
nflash	Number of flashes shown in the neon sign. Default is 30.
pause	Pause, in seconds, between two consecutive flashes shown in the neon sign. Default is 0.1.
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including a message and then a simulations of a neon sign.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmasneon()
xmasneon(language = "catalan", nflash = 10, pause = 0.05)
xmasneon(nflash = 100, pause = 0.01)
```

---

xmaspicasso   *Picasso's pigeon.*

Description

Approximation to Picasso's pigeon (2022 card).

Usage

```
xmaspicasso(
  year = 2023,
  language = c("english", "spanish", "catalan"),
  seed = NULL
)
```

Arguments

year   Year to be printed. Default is 2023.

language   Language to be used in the card. One of c("english", "spanish", "catalan").
              Default is "english".

seed   Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including an approximation to Picasso's pigeon.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmaspicasso()
xmaspicasso(year = 2023, language = "catalan")
```

---

xmasregression   *Christmas regression model.*

Description

A plot of the Christmas regression model (2019 card).

Usage

```
xmasregression(
  year = 2020,
  language = c("english", "spanish", "catalan"),
  time = 4,
  seed = NULL
)
```

Arguments

year	Year to be printed. Default is 2020.
language	Language to be used in the card. One of c("english","spanish", "catalan"). Default is "english".
time	Total time, in seconds, for the card generation. Default is 12.
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

An illustration of the Christmas regression model.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmasregression()
xmasregression(year = 2021, language = "catalan", time = 2)
```

---

xmassnowkoch   *Koch snowflakes.*

Description

Koch snowflakes (2012 card). Koch snowflakes (https://en.wikipedia.org/wiki/Koch_snowflake) are used to print the Christmas message in three languages (English, Catalan and Spanish).

Usage

```
xmassnowkoch(year = 2013, seed = NULL)
```

Arguments

year	Year to be printed. Default is 2013.
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including Koch snowflakes.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmassnowkoch()
```

---

xmassnowman   *Christmas snowman.*

Description

Christmas snowman (2014 card).

Usage

```
xmassnowman(
  year = 2015,
  language = c("english", "spanish", "catalan"),
  seed = NULL
)
```

Arguments

year	Year to be printed. Default is 2015.
language	Language to be used in the card. One of c("english", "spanish", "catalan"). Default is "english".
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including a snowman.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmassnowman(year = 2015, language = "catalan")
```

---

xmastext   *Christmas message.*

Description

A random repetition of a message (2010 card). Random allocation of repetitions of the Christmas message.

Usage

```
xmastext(
  year = 2011,
  language = c("english", "spanish", "catalan"),
  seed = NULL
)
```

Arguments

year   Year to be printed. Default is 2011.

language   Language to be used in the card. One of c("english","spanish", "catalan").
                Default is "english".

seed   Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including the repetition of the same message randomly allocated.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmastext(year = 2011, language = "spanish", seed = 666)
```

---

xmastree   *Naive Christmas tree.*

Description

A random naive Christmas tree (2008 card).

Usage

```
xmastree(
  year = 2009,
  language = c("english", "spanish", "catalan"),
  seed = NULL
)
```

Arguments

year	Year to be printed. Default is 2009.
language	Language to be used in the card. One of c("english","spanish", "catalan"). Default is "english".
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including a random tree.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmastree(year = 2020, language = "catalan", seed = 666)
```

---

xmastreeshape   *Christmas shaped tree.*

Description

Christmas trees (2017 card) with different shapes.

Usage

```
xmastreeshape(
  year = 2018,
  language = c("english", "spanish", "catalan"),
  shape = c("piramidal", "oval", "vshaped", "round", "columnar"),
  nballs = 15,
  ballscolor = NULL,
  seed = NULL
)
```

Arguments

year	Year to be printed. Default is 2018.
language	Language to be used in the card. One of c("english","spanish", "catalan"). Default is "english".
shape	The shape of the tree. One of c("piramidal", "oval","vshaped", "round", "columnar"). Default is "piramidal".
nballs	The number of balls in the tree. Default is 15.
ballscolor	The colors to be used for the balls in the tree. It must be a vector with names of colors included in colors(), or NULL (default). If NULL, then colors are randomly selected.
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including a christmas tree.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmastreeshape(shape = "oval", language = "catalan", ballscolor = "blue")
xmastreeshape(shape = "vshaped", nballs = 15, ballscolor = c("sienna2", "yellow2", "tomato"),
              seed = 1111)
xmastreeshape(shape = "columnar", nballs = 20, ballscolor = "red")
```

---

xmastreewire *Wire Christmas tree.*

Description

A random wire Christmas tree (2021 card).

Usage

```
xmastreewire(
  year = 2022,
  language = c("english", "spanish", "catalan"),
  seed = NULL
)
```

Arguments

year	Year to be printed. Default is 2022.
language	Language to be used in the card. One of c("english","spanish", "catalan"). Default is "english".
seed	Seed for reproducibility of the card. Default is NULL (no seed).

Value

A Christmas card plot including a random wire tree.

Author(s)

Jose Barrera-Gomez.

Examples

```
xmastreewire(year = 2020, language = "catalan", seed = 666)
```

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