

# Package ‘DCEtool’

April 15, 2022

**Title** Efficient and Accessible Discrete Choice Experiments

**Version** 1.0.0

**Description** Design, conduct and analyze 'DCEs' from a virtual interface in shiny. Reference: Perez-Troncoso, D. (2022) <<https://github.com/danielpereztr/DCEtool>>.

**License** GPL-3

**Encoding** UTF-8

**RoxygenNote** 7.1.2

**Depends** ggplot2, survival, shinyBS, shinycssloaders

**Imports** shiny, shinythemes, shinyWidgets, mvtnorm, DT, writexl, readxl, idfix, tidyr, mlogit, knitr, fastDummies, tidyverse, matrixStats, bslib, magrittr, htmltools, tibble, stringi, dfix, adjustedcranlogs, rmarkdown, rlist, remotes

**VignetteBuilder** knitr

**NeedsCompilation** no

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**Repository** CRAN

**Date/Publication** 2022-04-14 22:22:34 UTC

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DCEtool

*Efficient and Accessible DCEs: DCEtool*


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**Description**

Design, conduct, and analyze discrete choice experiments from a visual interface.

**Usage**

```
DCEtool()
```

**Value**

Use the visual interface to generate, load and download designs and data bases.

**Examples**

```
## Not run:

DCEtool()

## End(Not run)
```

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dce\_toolbox

*Generate Efficient Optimal and Bayesian DCEs*


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**Description**

Generates experimental designs for DCEs. (Backend of DCEtool) .

**Usage**

```
dce_toolbox(attributes, csets, alts, nochoice, priors, alg)
```

**Arguments**

attributes	A vector where each number represents an attribute and its values the number of levels.
csets	An integer indicating the number of sets in the DCE.
alts	An integer indicating the number of alternatives in each set.
nochoice	A boolean indicating whether there is an opt-out option (TRUE) or not (FALSE)
priors	A vector indicating the prior parameters of the conditional logit model.
alg	A string indicating the optimization algorithm: "cea" or "fedorov".

**Value**

design	The design matrix
DB-error	The Bayesian D-error if the optimization algorithm is "cea"
D-error	The D-error if the optimization algorithm is "fedorov"
details	A string compiling the details of the procedure

**Examples**

```
dce_toolbox(c(2,2), 4, 2,
FALSE, c(0,0), "fedorov")
```

```
dce_toolbox(c(2,2), 4, 2,
FALSE, mvtnorm::rmvnorm(100,
                        c(0,0),
                        diag(length(c(0,0))))),
"cea")
```

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list.match	<i>Select members of a list that match given regex pattern</i>
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**Description**

Select members of a list that match given regex pattern

**Usage**

```
list.match(.data, pattern, ...)
```

**Arguments**

.data	A list or vector
pattern	character. The regex pattern to match the name of the members
...	Additional parameters to pass to grep

**Examples**

```
x <- list(p1 = list(type='A',score=list(c1=10,c2=8)),
         p2 = list(type='B',score=list(c1=9,c2=9)),
         p3 = list(type='B',score=list(c1=9,c2=7)))
list.match(x, 'p[12]')
list.match(x, '3')
```

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