Package 'SSRTcalc'

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Type Package

Title Easy SSRT Calculation in R

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Description This is a collection of functions to calculate stop-signal reaction time (SSRT) in R. This package includes functions for both integration and mean methods; both fixed and adaptive stop-signal delays are supported (see appropriate functions).

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Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

R topics documented:

`integration_adaptiveSSD` *SSRT using integration method for studies with "adaptive" method of setting SSD*

Description

Estimating SSRT using integration method for studies that use adaptive (increasing/decreasing by a given increment) stop-signal delays.

Usage

```
integration_adaptiveSSD(df, stop_col, rt_col, acc_col, ssd_col)
```

Arguments

df	Dataframe with response time, accuracy, indication whether trial is stop or go, and delays for a given trial.
stop_col	Name of the column in the dataframe df that indicates whether a given trial is a "stop" or a "go" trial (0 = go, 1 = stop)
rt_col	Name of the column in the dataframe df that contains response time in seconds
acc_col	Name of the column in the dataframe df that contains accuracy of inhibition (0 = incorrect, 1 = correct)
ssd_col	Name of the column in the dataframe df that contains stop-signal delays

Value

SSRT corresponding to the nth rt -ssd; n = p(respond|signal)*number of goRTs

Examples

```
## Not run: integration_adaptiveSSD(df = results_df, stop_col = 'stopgo',
ssd_col = 'soa', rt_col = 'RT', acc_col = 'acc')
## End(Not run)
```

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integration_fixedSSD *SSRT using integration method for studies with "fixed" method of setting SSD*

Description

Estimating SSRT using integration method for studies that use fixed (randomly chosen on each trial from a pre-determined set) stop-signal delays.

Usage

```
integration_fixedSSD(df, stop_col, rt_col, acc_col, ssd_col, ssd_list)
```

Arguments

df	Dataframe with response time, accuracy, indication whether trial is stop or go, and delays for a given trial.
stop_col	Name of the column in the dataframe df that indicates whether a given trial is a "stop" or a "go" trial (0 = go, 1 = stop)
rt_col	Name of the column in the dataframe df that contains response time in seconds
acc_col	Name of the column in the dataframe df that contains accuracy of inhibition (0 = incorrect, 1 = correct)
ssd_col	Name of the column in the dataframe df that contains stop-signal delays
ssd_list	List of stop-signal delays used in the experiment

Value

SSRT corresponding to the nth rt -ssd; n = p(respond|signal)*number of goRTs

Examples

```
## Not run: integration_fixedSSD(df = results_df, stop_col = 'stopgo',  ssd_col = 'soa',
rt_col = 'RT', acc_col = 'acc', ssd_list = c(0.4, 0.6, 0.8, 0.9, 1.0))
## End(Not run)
```

`mean_adaptiveSSD` *SSRT using mean method for studies with "adaptive" method of setting SSD*

Description

Estimating SSRT using mean method for studies that use adaptive (increasing/decreasing by a given increment) stop-signal delays

Usage

```
mean_adaptiveSSD(df, rt_col, ssd_col, stop_col)
```

Arguments

`df`	Dataframe with response time, accuracy, indication whether trial is stop or go, and delays for a given trial.
`rt_col`	Name of the column in the dataframe `df` that contains response time in seconds
`ssd_col`	Name of the column in the dataframe `df` that contains stop-signal delays
`stop_col`	Name of the column in the dataframe `df` that indicates whether a given trial is a "stop" or a "go" trial (0 = go, 1 = stop)

Value

Spline-interpolated stop-signal reaction time corresponding roughly to 50

Examples

```
## Not run: mean_adaptiveSSD(df = results_df, stop_col = 'stopgo',  ssd_col = 'soa', rt_col = 'RT')
```

`mean_fixedSSD` *SSRT using mean method for studies with "fixed" method of setting SSD*

Description

Estimating SSRT using mean method for studies that use fixed (randomly chosen on each trial from a pre-determined set) stop-signal delays

Usage

```
mean_fixedSSD(df, stop_col, rt_col, acc_col, ssd_col, ssd_list)
```

Arguments

df	Dataframe with response time, accuracy, indication whether trial is stop or go, and delays for a given trial.
stop_col	Name of the column in the dataframe df that indicates whether a given trial is a "stop" or a "go" trial (0 = go, 1 = stop)
rt_col	Name of the column in the dataframe df that contains response time in seconds
acc_col	Name of the column in the dataframe df that contains accuracy of inhibition (0 = incorrect, 1 = correct)
ssd_col	Name of the column in the dataframe df that contains stop-signal delays
ssd_list	List of stop-signal delays used in the experiment

Value

Stop-signal reaction time corresponding roughly to 50 percent inhibition accuracy.

Examples

```
## Not run: mean_fixedSSD(df = results_df, rt_col = 'RT', stop_col = 'stopgo', acc_col = 'sst_acc',
ssd_col = 'soa', ssd_list = c(0.1, 0.2, 0.3, 0.5, 0.6))
## End(Not run)
```

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plotInhFunc *Plots and prints stop-signal delays and accuracies*

Description

Plots and prints stop-signal delays and corresponding accuracies. For studies that use fixed (randomly chosen on each trial from a pre-determined set) stop-signal delays.

Usage

```
plotInhFunc(df, stop_col, ssd_col, acc_col)
```

Arguments

df	Dataframe with response time, accuracy, indication whether trial is stop or go, and delays for a given trial.
stop_col	Name of the column in the dataframe df that indicates whether a given trial is a "stop" or a "go" trial (0 = go, 1 = stop)
ssd_col	Name of the column in the dataframe df that contains stop-signal delays
acc_col	Name of the column in the dataframe df that contains accuracy of inhibition (0 = incorrect, 1 = correct)

Value

Line plot of the inhibition function.

Examples

```
## Not run: plotInhFunc(df = df, stop_col='vol', ssd_col='soa', acc_col='agn_acc')
```

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