Package ‘rnr’

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Author Jongbin Jung
Maintainer Jongbin Jung <me@jongbin.com>
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**rnr**

*rnr: A package for computing Rosenbaum and Rubin sensitivity*

Description

The rnr package provides functions for computing sensitivity of counterfactual estimates under assumptions of unobserved confounding.

**sensitize**

*Generic sensitizing for Rosenbaum & Rubin sensitivity analysis*

Description

Generic sensitizing for Rosenbaum & Rubin sensitivity analysis

Usage

```r
sensitize(obj, q, dp, d0, d1, ...)
```

Arguments

- `obj`: data to sensitize
- `q`: $p(u = 1 | x)$
- `dp`: change in log-odds of treat = 1 if $u = 1$
- `d0`: change in log-odds of response = 1 if treat = 0 and $u = 1$
- `d1`: change in log-odds of response = 1 if treat = 1 and $u = 1$
- `...`: additional arguments required to sensitize object

Value

A sensitized object, identical to, or inheriting the class of original `obj`
sensitize.data.frame

Compute the sensitivity-adjusted estimates of predicted outcome given treatment/control

Description
Compute the sensitivity-adjusted estimates of predicted outcome given treatment/control

Usage

```r
## S3 method for class 'data.frame'
sensitize(obj, q, dp, d0, d1, debug = FALSE, ...)
```

Arguments

- `obj` data frame to analyze; must include columns $treat$: Observed (binary) treatment, e.g., `bail_set` $resp_ctl$: Predicted probability of positive resp given control, $resp_trt$: Predicted probability of positive resp given treatment, $p_trt$: predicted probability of treatment
- `q` \( p(u = 1 \mid x) \)
- `dp` change in log-odds of treat = 1 if \( u = 1 \)
- `d0` change in log-odds of response = 1 if treat = 0 and \( u = 1 \)
- `d1` change in log-odds of response = 1 if treat = 1 and \( u = 1 \)
- `debug` logical, whether or not to return columns of intermediate variables for debugging purposes
- `...` additional arguments are ignored

Value
A data frame with the columns `resp_ctl` and `resp_trt` updated according to the sensitivity parameters. If `debug = TRUE`, returned data frame will also contain columns of intermediate variables computed for sensitivity, appended with “” (e.g., `gamma__`), with the original response estimates renamed as `resp_trt_trt__ = resp_trt resp_ctl_ctl__ = resp_ctl`

Examples

```r
obj <- data.frame(treat = 0L, resp_ctl = .2L resp_trt = .5L, p_trt = .5L)
sensitize(obj, q = .5L, dp = log(2L), d0 = log(2L), d1 = log(2L))
```
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