Package 'optimalcausalities'

March 23, 2021

Title Optimal Stochastic Interventions in High-dimensional Data

Version 2.0

Authors

'Kosuke Imai <imai@harvard.edu> [aut], Rohit <rohitchaudhuri@g.harvard.edu> [aut, cre], Connor Jerzak <cjerzak@g.harvard.edu> [aut, cre]'

Description Description here.

Depends R (>= 3.3.3)

License

Creative Commons Attribution-Noncommercial-No Derivative Works 4.0, for academic use only.

Encoding UTF-8

LazyData true

Maintainer 'Connor Jerzak' <connor.jerzak@gmail.com>

Imports Rsolnp, keyATM

RoxygenNote 7.1.1

R topics documented:

`analyze_fixedStrategy` *analyze_fixedStrategy*

Description

Implements ...

Usage

```
analyze_fixedStrategy(
  specifiedAssignmentMechanism = NULL,
  hypotheticalAssignmentMechanism = NULL
)
```

Arguments

dfm	'document-feature matrix'. A list ...

Value

A list consiting of

- Items.

References

- Kosuke Imai, Rohit, Connor

Examples

```
#set seed
set.seed(1)

#Geneate data
x <- rnorm(100)
```

---

computeQse_conjoint *computeQse_conjoint*

Description

Implements ...

Usage

```
computeQse_conjoint(
  FactorsMat,
  Yobs,
  hypotheticalProbList,
  assignmentProbList,
  log_pr_w = NULL,
  hajek = T,
  returnLog = T,
  log_treatment_combs = NULL
)
```

Arguments

dfm	'document-feature matrix'. A list ...

Value

A list consiting of

- Items.

References

- Kosuke, Rohit, Connor. Working Paper.

Examples

```
#set seed
set.seed(1)

#Geneate data
x <- rnorm(100)
```

---

computeQse_lda *computeQse_lda*

Description

Implements ...

Usage

```
computeQse_lda(
  THETA__,
  INDICES_,
  DOC_INDICES_U,
  D_INDICES_U,
  PI_MAT_INPUT,
  MARGINAL_BOUNDS,
  DOC_LIST,
  MODAL_DOC_LEN,
  TERMS_MAT_INPUT,
  LOG_TREATCOMBS,
  YOBS,
  returnLog = T,
  LOG_PR_W = NULL
)
```

Arguments

dfm	'document-feature matrix'. A list ...

Value

A list consiting of

- Items.

References

- Kosuke, Rohit, Connor. Working Paper.

Examples

```
#set seed
set.seed(1)

#Geneate data
x <- rnorm(100)
```

`computeQ_conjoint` *computeQ_conjoint*

Description

Implements ...

Usage

```
computeQ_conjoint(
  FactorsMat,
  Yobs,
  assignmentProbList,
  hypotheticalProbList = NULL,
  se_ub = NULL,
  split1_indices = NULL,
  split2_indices = NULL,
  computeSEs = F,
  openBrowser = F,
  hajek = T,
  findMax = T,
  quiet = T
)
```

Arguments

`dfm`	'document-feature matrix'. A list ...

Value

A list consiting of

- Items.

References

- Kosuke Imai, Rohit, Connor

Examples

```
#set seed
set.seed(1)

#Geneate data
x <- rnorm(100)
```

---

computeQ_lda *computeQ_lda*

Description

Implements ...

Usage

```
computeQ_lda(
  DTM_MAT,
  n_fold = 3,
  Yobs,
  topicProportions,
  document_list,
  wordTopicDistributions,
  se_ub = sd(Yobs)/10,
  split2_indices = NULL,
  split1_indices = NULL,
  computeSEs = T,
  findMax = T,
  nboot = 10,
  trim_q = 1,
  maxWt = 1e+10,
  maxWt_hajek = NULL,
  alphaLevel = 0.05,
  openBrowser = F
)
```

Arguments

dfm	'document-feature matrix'. A list ...

Value

A list consiting of

- Items.

References

- Kosuke Imai, Rohit, Connor

Examples

```
#set seed
set.seed(1)

#Geneate data
x <- rnorm(100)
```

`find_optimalStrategy` *find_optimalStrategy*

Description

Implements ...

Usage

```
find_optimalStrategy(specifiedAssignmentMechanism = NULL, cubeConstraint = F)
```

Arguments

`dfm`	'document-feature matrix'. A list ...

Value

A list consiting of

- Items.

References

- Kosuke Imai, Rohit, Connor

Examples

```
#set seed
set.seed(1)

#Geneate data
x <- rnorm(100)
```

plot_optimalStrategy *plot_optimalStrategy*

Description

Implements ...

Usage

```
plot_optimalStrategy(
  specifiedAssignmentMechanism = NULL,
  hypotheticalAssignmentMechanism = NULL
)
```

Arguments

dfm	'document-feature matrix'. A list ...

Value

A list consiting of

- Items.

References

- Kosuke Imai, Rohit, Connor

Examples

```
#set seed
set.seed(1)

#Geneate data
x <- rnorm(100)
```

---

specify_treatmentMechanism *specify*

Description

Implements ...

Usage

```
specify_treatmentMechanism(Yobs, W, PrW_parameters = list())
```

Arguments

dfm	'document-feature matrix'. A list ...

Value

A list consiting of

- Items.

References

- Kosuke Imai, Rohit, Connor

Examples

```
#set seed
set.seed(1)

#Geneate data
x <- rnorm(100)
```

Index