

# Package ‘meifly’

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**Type** Package

**Title** Interactive model exploration using GGobi

**Version** 0.2

**Imports** plyr, leaps, MASS,

**Suggests** rggobi

**Author** Hadley Wickham <h.wickham@gmail.com>

**Maintainer** Hadley Wickham <h.wickham@gmail.com>

**Description** Exploratory model analysis. Fit and graphical explore ensembles of linear models.

**URL** <http://had.co.nz/meifly>

**License** GPL

**LazyData** true

**Collate** 'ensemble.r' 'generate.r' 'ggobi.r' 'meifly.r' 'summarise.r'

**Repository** CRAN

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## R topics documented:

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|---------------|---|
| coef.ensemble | <i>Calculate coefficients for all models in ensemble.</i> |
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### Description

Calculate coefficients for all models in ensemble. Returns raw, t-value, absolute t-value, and standardised coefficient values.

### Usage

```
## S3 method for class 'ensemble'
coef(object, ...)
```

### Arguments

|        |                         |
|--------|-------------------------|
| object | ensemble of models      |
| ...    | other arguments ignored |

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|            |   |
|------------|---|
| findmodels | <i>General ensemble of models from models in global workspace'...</i> |
|------------|---|

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### Description

General ensemble of models from models in global workspace'

### Usage

```
findmodels(modeltype="lm", dataset, pattern)
```

### Arguments

|           |  |
|-----------|--|
| modeltype | model class                                    |
| dataset   | if specified, all models must use this dataset |
| pattern   | pattern of model object names to match         |

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|        |  |
|--------|--|
| fitall | <i>Fit all combinations of x variables (<math>2^p</math>).</i> |
|--------|--|

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**Description**

Fit all combinations of x variables ( $2^p$ ).

**Usage**

```
fitall(y, x, method="lm", ...)
```

**Arguments**

|        |  |
|--------|--|
| y      | vector y values  |
| x      | matrix of x values   |
| method | name of method used to fit the model, e.g <a href="#">lm</a> , <a href="#">r1m</a> |
| ...    | other arguments passed on to method  |

**Details**

This technique generalises [fitbest](#). While it is much slower it will work for any type of model.

**Examples**

```
y <- swiss$Fertility
x <- swiss[, -1]
mods <- fitall(y, x, "lm")
```

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|         |  |
|---------|--|
| fitbest | <i>Use the leaps package to generate the best subsets.</i> |
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**Description**

Use the leaps package to generate the best subsets.

**Usage**

```
fitbest(formula, data, nbest=10, ...)
```

**Arguments**

|         |  |
|---------|--|
| formula | model formula  |
| data    | data frame   |
| nbest   | number of subsets of each size to record             |
| ...     | other arguments passed to <a href="#">regsubsets</a> |

**Examples**

```
y <- swiss$Fertility
mods <- fitbest(Fertility ~ ., swiss)
```

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|                |  |
|----------------|--|
| ggobi.ensemble | <i>Load model ensemble into GGobi with appropriate edge structure...</i> |
|----------------|--|

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**Description**

Load model ensemble into GGobi with appropriate edge structure

**Usage**

```
ggobi.ensemble(data, ...)
```

**Arguments**

|      |                         |
|------|-------------------------|
| data | model ensemble object   |
| ...  | other arguments ignored |

**Examples**

```
y <- swiss$Fertility
x <- swiss[, -1]
mods <- fitall(y, x, "lm")
## Not run:
library(rggobi)
ggobi(mods, swiss)

## End(Not run)
```

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|        |  |
|--------|--|
| lmboot | <i>Generate linear models by bootstrapping observations...</i> |
|--------|--|

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**Description**

Generate linear models by bootstrapping observations

**Usage**

```
lmboot(formula, data, n=100)
```

**Arguments**

|         |  |
|---------|--|
| formula | model formula                                |
| data    | data set                                     |
| n       | number of bootstrapped data sets to generate |

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|                    |  |
|--------------------|--|
| residuals.ensemble | <i>Calculate residuals for all models in ensemble.</i> |
|--------------------|--|

---

**Description**

Calculate residuals for all models in ensemble.

**Usage**

```
## S3 method for class 'ensemble'  
residuals(object, ...)
```

**Arguments**

|        |                         |
|--------|-------------------------|
| object | ensemble of models      |
| ...    | other arguments ignored |

**Value**

data.frame of class resid\_ensemble

**See Also**

[summary.resid\\_ensemble](#)

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|                  |   |
|------------------|---|
| summary.ensemble | <i>Returns degrees of freedom, log likelihood, R-squared, AIC, BIC and...</i> |
|------------------|---|

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**Description**

Returns degrees of freedom, log likelihood, R-squared, AIC, BIC and adjusted R-squared.

**Usage**

```
## S3 method for class 'ensemble'  
summary(object, ...)
```

**Arguments**

|        |                         |
|--------|-------------------------|
| object | ensemble of models      |
| ...    | other arguments ignored |

---

summary.resid\_ensemble

*Summarise residuals from ensemble.*

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### Description

Summarise residuals from ensemble.

### Usage

```
## S3 method for class 'resid_ensemble'  
summary(object, data=attr(object,  
  "data"), ...)
```

### Arguments

|        |   |
|--------|---|
| object | model residuals from <a href="#">residuals.ensemble</a> |
| data   | associated data set                                     |
| ...    | other arguments ignored                                 |

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summary.variable\_ensemble

*Summarise variable ensemble.*

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### Description

Summarise variable ensemble.

### Usage

```
## S3 method for class 'variable_ensemble'  
summary(object, ...)
```

### Arguments

|        |                         |
|--------|-------------------------|
| object | ensemble of models      |
| ...    | other arguments ignored |

### Details

Provides variable level statistics.

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