
Linear Regression Documentation

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class cls_reg.**LinReg** (*x*, *y*, *z*, *deg*)

MSE (*z*, *zpred*)

Finds the mean squared error of the real data and predicted values :param *z*: real data :param *zpred*: predicted data :type *z*: array :type *zpred*: array :return: The mean squared error :rtype: float

R2 (*z*, *zpred*)

Finds the R2 error of the real data and predicted values :param *z*: real data :param *zpred*: predicted data :type *z*: array :type *zpred*: array :return: The mean squared error :rtype: float

__init__ (*x*, *y*, *z*, *deg*)

Parameters

- **XY** (*array*) – A matrix of polynomial values
- **z** (*array*) – The values we are trying to fit
- **deg** (*int*) – The degree of polynomial we try to fit the data

__weakref__

list of weak references to the object (if defined)

bootstrap (*nBoots*)

I dont fucking know

kfold (*nfolds*)

I dont fucking know

lasso (*lamb*, *XY=None*, *z=None*)

Performs a Lasso regression linear fit

Parameters

- **XY** (*array*) – A matrix of polynomial values
- **z** (*array*) – The values we are trying to fit
- **lamb** (*float*, *int*) – The regularization constant

Returns The coefficient of the fitted polynomial

Return type array

ols (*XY=None*, *z=None*)

Performs a Ordinary least squares linear fit

Parameters

- **XY** (*array*) – A matrix of polynomial values
- **z** (*array*) – The values we are trying to fit

Returns The coefficient of the fitted polynomial

Return type array

ridge (*lamb*, *XY=None*, *z=None*)

Performs a Ridge regression linear fit

Parameters

- **XY** (*array*) – A matrix of polynomial values
- **z** (*array*) – The values we are trying to fit
- **lamb** (*float*, *int*) – The regularization constant

Returns The coefficient of the fitted polynomial

Return type array

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