abx_numpy Documentation

Release 0.1

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CHAPTER 1

abx_numpy Package

1.1 abx_numpy Package

abx_numpy: Main module

abx_numpy.abx_numpy.**abx**(*classes*, *features*, *distance_function*, *cutoff=1000*)

Calculate the ABX score for a set of classes and a features matrix.

The order of the 'classes' and the 'features' arrays must be the same.

Parameters **classes** : array (n_items)

1-D array containing the class labels of the items.

features : array (n_items, dim_features)

2-D array containing the features of the items.

distance_function : callable

Distance function to use.

cutoff : int, optionnal

Cutoff to use for sample (number of items kept). None for no sample. Default to 1000.

Returns **average** : float

average abx score

labels : array (n_classes)

1D array containing the unique classes

scores : array (n_classes, n_classes)

2D array containing the abx scores for each pair of classes. The diagonal contains nan values

abx_numpy.abx_numpy.**compute_distances**(*features*, *distance_function*)

Compute the distance matrix for an array of features and a distance function.

Parameters **features** : array (n_items, dim_features)

2-D array containing the features of the items.

distance_function : callable

Distance function to use.

Returns **distances** : array (n_items, n_items)

2-D array containing the pairwise distance of the items.

abx_numpy.abx_numpy.**sample**(*classes*, *features*, *cutoff*, *is_sorted=False*)

'Fair' sampling (non-uniform, inverse to the class weight)

Parameters **classes** : array (n_items)

1-D array containing the class labels of the items.

features : array (n_items, dim_features)

2-D array containing the features of the items.

cutoff : int

Cutoff to use for sample (number of items kept).

Returns sampled classes, sampled features

abx_numpy.abx_numpy.**score**(*classes*, *distances*, *is_sorted=False*)

Compute the ABX score for a set of sorted classes and a distance matrix.

Returns **average** : float

average abx score

labels : array (n_classes)

1D array containing the unique classes

scores : array (n_classes, n_classes)

2D array containing the abx scores for each pair of classes. The diagonal contains nan values

abx_numpy.abx_numpy.**sort**(*classes*, *features*)

Sort classes according to labels and features according to the new order

1.2 lib Module

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abx_numpy.lib.**unique_sorted**(*array*)

Performs unique on a sorted array and return the unique elements and the indexes of the first element of each block.

CHAPTER 2

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