tpotr documentation

July 3, 2019

`export` *Export the optimized pipeline as Python code*

Description

Export the optimized pipeline as Python code

Usage

```
export(obj, path)
```

Arguments

`obj`	A `TPOTClassifier` or a `TPOTRegressor`
`path`	`String` containing the path and file name of the desired output file

Value

The class probabilities of the input samples

`fit_predict` *Call fit and predict in sequence.*

Description

Call fit and predict in sequence.

Usage

```
fit_predict(obj, features, target, sample_weight = NULL, group = NULL)
```

Arguments

obj	A TPOTClassifier or a TPOTRegressor
target	List of class labels for prediction
group	Group labels for the samples used when performing cross-validation. This parameter should only be used in conjunction with sklearn's Group cross-validation functions, such as sklearn.model_selection.GroupKFold

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fit *Fitting a model to the data*

Description

Uses genetic programming to optimize a machine learning pipeline that maximizes score on the provided features and target. Performs internal k-fold cross-validaton to avoid overfitting on the provided data. The best pipeline is then trained on the entire set of provided samples.

Usage

```
fit(obj, features, target, sample_weight = NULL, group = NULL)
```

Arguments

obj	A TPOTClassifier or a TPOTRegressor
target	List of class labels for prediction
group	Group labels for the samples used when performing cross-validation. This parameter should only be used in conjunction with sklearn's Group cross-validation functions, such as sklearn.model_selection.GroupKFold
feature	A data.frame of observations
sample_weights	Per-sample weights. Higher weights indicate more importance. If specified, sample_weight will be passed to any pipeline element whose fit() function accepts a sample_weight argument. By default, using sample_weight does not affect tpot's scoring functions, which determine preferences between pipelines.

Value

Returns a copy of the fitted TPOT Object

install_tpot *Install TPOT and its dependencies*

Description

Install TPOT and its dependencies

Usage

```
install_tpot(method = c("auto", "conda"), conda = "auto",
  version = "default", envname = "r-tpot", extra_packages = NULL,
  extra_pip_packages = NULL, restart_session = TRUE)
```

Arguments

method	Installation method. By default, "auto" tries to finds a method that will work in the local environment. Change the default to force a specific installation method.
conda	Path to conda executable (or "auto" to find conda using the PATH and other conventional install locations).
version	TPOT version to install. Specify "default" to install the latest release version. You can also provide a full major.minor.patch specification (e.g. "1.1.0").
envname	Name of Python environment to install within. Default is "r-tpot".
extra_packages	Additional Python packages to install along with TPOT.
restart_session	Restart R session after installing (note this will only occur within RStudio).

predict_proba *Use the optimized pipeline to estimate the class probabilities for a feature set.*

Description

Use the optimized pipeline to estimate the class probabilities for a feature set.

Usage

```
predict_proba(obj, features)
```

Arguments

obj	A `TPOTClassifier` or a `TPOTRegressor`
feature	A `data.frame` of observations

Value

The class probabilities of the input samples

predict *Use the optimized pipeline to predict the target for a feature set*

Description

Use the optimized pipeline to predict the target for a feature set

Usage

```
predict(obj, ...)
```

Arguments

obj	A TPOTClassifier or a TPOTRegressor
feature	A data.frame of observations

Value

Predicted target for the samples in the feature matrix

score *Return the score on the given testing data using the user-specified scoring function.*

Description

Return the score on the given testing data using the user-specified scoring function.

Usage

```
score(obj, testing_features, testing_classes)
```

Arguments

obj	A TPOTClassifier or a TPOTRegressor
testing_features	A data.frame of the testing set
testing_classes	A list of class labels for prediction in the testing set

Value

float The estimated test set accuracy

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