
sklearn-features Documentation

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Tim Leslie

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sklearn-features provides an API to simplify feature engineering with scikit-learn and pandas.

CHAPTER 1

API summary

<code>transformers.DataFrameSelector(key)</code>	Transforms a DataFrame into a Series by selecting a single column by key.
<code>transformers.SeriesReshaper</code>	Transforms a Series of size N into an (N, 1) shaped numpy array.
<code>transformers.DataFrameReshaper</code>	Transforms a DataFrame of size NxM into an (N, M) shaped numpy array.
<code>transformers.NullTransformer([feature_name])</code>	Pass through the Series completely unchanged.
<code>transformers.ScalingTransformer(scaling_factor)</code>	Apply a constant scaling factor to a Series.
<code>transformers.DateAttributeTransformer(attr)</code>	Select a particular attribute from the .dt property of a Series.
<code>transformers.MultiDateTransformer(dates)</code>	
<code>transformers.LinearDateTransformer([d0, delta])</code>	Convert a datetime Series into a float Series.
<code>transformers.LabelEncoderWithUnknown([...])</code>	Convert a categorical feature into values [0, n], where [0, n) represent the known categories from the training data and n represents unknown data.
<code>transformers.OneHotWithUnknown([feature_names])</code>	
<code>transformers.OneHotWithFixedFeatures([...])</code>	
<code>transformers.series_pipeline(key, steps)</code>	
<code>transformers.dataframe_pipeline(key, steps)</code>	

1.1 transformers.DataFrameSelector

class `transformers.DataFrameSelector` (*key*)

Transforms a DataFrame into a Series by selecting a single column by key.

`__init__` (*key*)

Methods

<code>__init__(key)</code>	
<code>fit(df[, y])</code>	
<code>fit_transform(X[, y])</code>	Fit to data, then transform it.
<code>get_params([deep])</code>	Get parameters for this estimator.
<code>set_params(**params)</code>	Set the parameters of this estimator.
<code>transform(df)</code>	

Attributes

<code>DEFAULT_PIPELINE_NAME</code>

1.2 transformers.SeriesReshaper

class `transformers.SeriesReshaper`

Transforms a Series of size N into an (N, 1) shaped numpy array.

`__init__()`
`x.__init__(...)` initializes x; see `help(type(x))` for signature

Methods

<code>fit(ds[, y])</code>	
<code>fit_transform(X[, y])</code>	Fit to data, then transform it.
<code>get_feature_names()</code>	
<code>get_params([deep])</code>	Get parameters for this estimator.
<code>set_params(**params)</code>	Set the parameters of this estimator.
<code>transform(ds)</code>	

Attributes

<code>DEFAULT_PIPELINE_NAME</code>

1.3 transformers.DataFrameReshaper

class `transformers.DataFrameReshaper`

Transforms a DataFrame of size NxM into an (N, M) shaped numpy array.

`__init__()`
`x.__init__(...)` initializes x; see `help(type(x))` for signature

Methods

<code>fit(df[, y])</code>	
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Table 1.6 – continued from previous page

<code>fit_transform(X[, y])</code>	Fit to data, then transform it.
<code>get_feature_names()</code>	
<code>get_params([deep])</code>	Get parameters for this estimator.
<code>set_params(**params)</code>	Set the parameters of this estimator.
<code>transform(df)</code>	

Attributes

<code>DEFAULT_PIPELINE_NAME</code>

1.4 transformers.NullTransformer

class `transformers.NullTransformer` (*feature_name=None*)
Pass through the Series completely unchanged.
`__init__` (*feature_name=None*)

Methods

<code>__init__([feature_name])</code>	
<code>fit(ds[, y])</code>	
<code>fit_transform(X[, y])</code>	Fit to data, then transform it.
<code>get_feature_names()</code>	
<code>get_params([deep])</code>	Get parameters for this estimator.
<code>set_params(**params)</code>	Set the parameters of this estimator.
<code>transform(ds)</code>	

Attributes

<code>DEFAULT_PIPELINE_NAME</code>

1.5 transformers.ScalingTransformer

class `transformers.ScalingTransformer` (*scaling_factor*)
Apply a constant scaling factor to a Series.
`__init__` (*scaling_factor*)

Methods

<code>__init__(scaling_factor)</code>	
<code>fit(ds[, y])</code>	
Continued on next page	

Table 1.10 – continued from previous page

<code>fit_transform(X[, y])</code>	Fit to data, then transform it.
<code>get_feature_names()</code>	
<code>get_params([deep])</code>	Get parameters for this estimator.
<code>set_params(**params)</code>	Set the parameters of this estimator.
<code>transform(ds)</code>	

Attributes

<code>DEFAULT_PIPELINE_NAME</code>

1.6 transformers.DateAttributeTransformer

`class transformers.DateAttributeTransformer` (*attr*)
Select a particular attribute from the .dt property of a Series.
<https://pandas.pydata.org/pandas-docs/stable/api.html#datetimelike-properties>
`__init__` (*attr*)

Methods

<code>__init__</code> (<i>attr</i>)	
<code>fit(ds[, y])</code>	
<code>fit_transform(X[, y])</code>	Fit to data, then transform it.
<code>get_feature_names()</code>	
<code>get_params([deep])</code>	Get parameters for this estimator.
<code>set_params(**params)</code>	Set the parameters of this estimator.
<code>transform(ds)</code>	

Attributes

<code>DEFAULT_PIPELINE_NAME</code>

1.7 transformers.MultiDateTransformer

`class transformers.MultiDateTransformer` (*dates*)

`__init__` (*dates*)

Methods

<code>__init__</code> (<i>dates</i>)	
Continued on next page	

Table 1.14 – continued from previous page

<code>fit(ds[, y])</code>	
<code>fit_transform(X[, y])</code>	Fit to data, then transform it.
<code>get_feature_names()</code>	
<code>get_params([deep])</code>	Get parameters for this estimator.
<code>set_params(**params)</code>	Set the parameters of this estimator.
<code>transform(ds)</code>	

Attributes

<code>DEFAULT_PIPELINE_NAME</code>

1.8 transformers.LinearDateTransformer

class `transformers.LinearDateTransformer` (*d0=None, delta=Timedelta('1 days 00:00:00')*)

Convert a datetime Series into a float Series.

Perform a linear transformation based on *d0* and *delta*.

Defaults: *d0*: `training_ds.min()` *delta*: 1 day

`__init__` (*d0=None, delta=Timedelta('1 days 00:00:00')*)

Methods

<code>__init__([d0, delta])</code>	
<code>fit(ds[, y])</code>	
<code>fit_transform(X[, y])</code>	Fit to data, then transform it.
<code>get_feature_names()</code>	
<code>get_params([deep])</code>	Get parameters for this estimator.
<code>set_params(**params)</code>	Set the parameters of this estimator.
<code>transform(ds)</code>	

Attributes

<code>DEFAULT_PIPELINE_NAME</code>

1.9 transformers.LabelEncoderWithUnknown

class `transformers.LabelEncoderWithUnknown` (*feature_name=None*)

Convert a categorical feature into values `[0, n]`, where `[0, n)` represent the known categories from the training data and `n` represents unknown data.

`__init__` (*feature_name=None*)

Methods

<code>__init__([feature_name])</code>	
<code>fit(ds[, y])</code>	
<code>fit_transform(X[, y])</code>	Fit to data, then transform it.
<code>get_feature_names()</code>	
<code>get_params([deep])</code>	Get parameters for this estimator.
<code>set_params(**params)</code>	Set the parameters of this estimator.
<code>transform(ds)</code>	

Attributes

DEFAULT_PIPELINE_NAME

1.10 transformers.OneHotWithUnknown

class `transformers.OneHotWithUnknown` (*feature_names=None*)

`__init__` (*feature_names=None*)

Methods

<code>__init__([feature_names])</code>	
<code>fit(ds[, y])</code>	
<code>fit_transform(X[, y])</code>	Fit to data, then transform it.
<code>get_feature_names()</code>	
<code>get_params([deep])</code>	Get parameters for this estimator.
<code>set_params(**params)</code>	Set the parameters of this estimator.
<code>transform(ds)</code>	

Attributes

DEFAULT_PIPELINE_NAME

1.11 transformers.OneHotWithFixedFeatures

class `transformers.OneHotWithFixedFeatures` (*feature_names=None*)

`__init__` (*feature_names=None*)

Methods

<code>__init__([feature_names])</code>	
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Table 1.22 – continued from previous page

<code>fit(ds[, y])</code>	
<code>fit_transform(X[, y])</code>	Fit to data, then transform it.
<code>get_feature_names()</code>	
<code>get_params([deep])</code>	Get parameters for this estimator.
<code>set_params(**params)</code>	Set the parameters of this estimator.
<code>transform(ds)</code>	

Attributes

<code>DEFAULT_PIPELINE_NAME</code>

1.12 transformers.series_pipeline

`transformers.series_pipeline` (*key, steps*)

1.13 transformers.dataframe_pipeline

`transformers.dataframe_pipeline` (*key, steps*)

CHAPTER 2

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