Column Transformer

Column Transformer is an easy way to apply multiple transformations to your data within a few lines of code.

ColumnTransfomer(transformers=[

("name", transformation, column)

], remainder="passthrough")

```
ColumnTransformer(transformers=[
    ("Impute_age", SimpleImputer(), ["age"])
], remainder='passthrough')
```

passthrough means to leave the rest of the columns alone and only apply the transformation to the one mentioned.

Example

	sex	age	class
0	male	22.0	Third
1	female	38.0	First
2	female	26.0	Third
3	female	35.0	First
4	male	35.0	Third

Suppose we've a dataset with three columns.

```python
from sklearn.impute import SimpleImputer
from sklearn.preprocessing import OneHotEncoder
from sklearn.preprocessing import OrdinalEncoder
from sklearn.compose import ColumnTransformer
```

We want to apply One-Hot Encoder to sex, Simple Imputer to age and Ordinal Encoder to class column.

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Example

Adding all the transformation and the column-indices.
[0],[1],[2] are for sex, age and class respectively.

```python
transformer = ColumnTransformer(transformers=[
("OneHot", OneHotEncoder(sparse=False, drop='first'),[0]),
("Impute", SimpleImputer(), [1]),
("Ord", OrdinalEncoder(categories=[["Third","Second","First"]]),[2])])
```

fit and transform the transfomer on the dataset

```python
df = transformer.fit_transform(df)
df = pd.DataFrame(df, columns=df_columns)
```

	sex	age	class
0	1.0	22.0	0.0
1	0.0	38.0	2.0
2	0.0	26.0	0.0
3	0.0	35.0	2.0
4	1.0	35.0	0.0

The final result

Note: Since the transformations return numpy arrays so we converted them into a dataframe again for better view.

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