Transformers

- why did we required Column transformer ?

lets say I have a data

Age	city	gender	review

This has few empty values so we require simple imputer to fill those.

City & Gender → requires one hot encoding and review requires ordinal encoding.

Age	city	gender	review

[ ] [ ] [ ]

Now the problem arises for combining these 3 all together to create our dataset for processing after we have performed our encodings etc.

see the Column transformer ipynb file.

Now Column Transformer help us combine all these data in a single go with very few lines of code.

Column Transformer

```
from sklearn.compose import ColumnTransformer
```

transformers we are using

```
transformer = ColumnTransformer(transformers = [
('tnf', SimpleImputer(), ['Fever']),
('tnf2', OrdinalEncoder(categories=[['mild', 'strong']]), ['Cough']),
('tnf3', OneHotEncoder(sparse=False, dtype=int32), ['Gender', 'City'])
], remainder = 'passthrough')
```

Operation we are doing

Name of transformer

Column that operation is performed

```
transformer.fit_transform(X_train)

transformer.transform(X_test)
```

This option is for what needs to be done with other columns in dataframe where transformation is not applied

remainder = 'passthrough' → keep those columns in dataframe as it is

remainder = "drop" ↓

Drop those columns