

Python 3.8.10 (default, Sep 28 2021, 16:10:42)

[GCC 9.3.0] on linux

Type "help", "copyright", "credits" or "license" for more information.

```
>>> import numpy as np
```

```
>>> import pandas as pd
```

```
>>> df = pd.read_csv('data.csv')
```

```
>>> df.head()
```

	recency	history	used_discount	used_bogo	...	is_referral	channel	offer	conversion
0	10	142.44	1	0	...	0	Phone Buy One Get One	0	0
1	6	329.08	1	1	...	1	Web No Offer	0	0
2	7	180.65	0	1	...	1	Web Buy One Get One	0	0
3	9	675.83	1	0	...	1	Web Discount	0	0
4	2	45.34	1	0	...	0	Web Buy One Get One	0	0

[5 rows x 9 columns]

```
>>> df.shape
```

```
(64000, 9)
```

```
>>> df.dtypes
```

```
recency      int64
history      float64
used_discount int64
used_bogo    int64
zip_code     object
is_referral  int64
channel      object
offer        object
conversion   int64
```

```
dtype: object
```

```
>>> df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
```

```
RangeIndex: 64000 entries, 0 to 63999
```

```
Data columns (total 9 columns):
```

```
recency      64000 non-null int64
history      64000 non-null float64
used_discount 64000 non-null int64
used_bogo    64000 non-null int64
zip_code     64000 non-null object
is_referral  64000 non-null int64
channel      64000 non-null object
offer        64000 non-null object
conversion   64000 non-null int64
```

```
dtypes: float64(1), int64(5), object(3)
```

```
memory usage: 4.4+ MB
```

```
>>> df = df['conversion'].replace('comversion', 'target')
```

```
,>>> df = df['offer'].replace('offer', 'treatment')
```

```
>>> df = df['treatment'].isin([1.0,'Buy One Get One'])
```

```
>>> df = df['treatment'].replace({True: 1, False: 0})
```

```
>>> df.to_csv('data.csv')
```

```
>>>
```