	CRIM	ZN	INDUS	CHAS	NOX	RM	AGE	DIS	RAD	TAX	PTRATIO	B	LSTAT	MEDV
0	0.00632	18.0	2.31	0.0	0.538	6.575	65.2	4.0900	1	296	15.3	396.90	4.98	24.0
1	0.02731	0.0	7.07	0.0	0.469	6.421	78.9	4.9671	2	242	17.8	396.90	9.14	21.6
2	0.02729	0.0	7.07	0.0	0.469	7.185	61.1	4.9671	2	242	17.8	392.83	4.03	34.7
3	0.03237	0.0	2.18	0.0	0.458	6.998	45.8	6.0622	3	222	18.7	394.63	2.94	33.4
4	0.06905	0.0	2.18	0.0	0.458	7.147	54.2	6.0622	3	222	18.7	396.90	NaN	36.2

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 506 entries, 0 to 505
Data columns (total 14 columns):
 #   Column   Non-Null Count  Dtype
---  ------   --------------  -----
 0   CRIM     486 non-null    float64
 1   ZN       486 non-null    float64
 2   INDUS    486 non-null    float64
 3   CHAS     486 non-null    float64
 4   NOX      506 non-null    float64
 5   RM       506 non-null    float64
 6   AGE      486 non-null    float64
 7   DIS      506 non-null    float64
 8   RAD      506 non-null    int64
 9   TAX      506 non-null    int64
 10  PTRATIO  506 non-null    float64
 11  B        506 non-null    float64
 12  LSTAT    486 non-null    float64
 13  MEDV     506 non-null    float64
dtypes: float64(12), int64(2)
memory usage: 55.5 KB
```

t[12]: array([0., nan, 1.])

Out[11]:
```
CRIM       484
ZN          26
INDUS       76
CHAS         2
NOX         81
RM         446
AGE        348
DIS        412
RAD          9
TAX         66
PTRATIO     46
B          357
LSTAT      438
MEDV       229
dtype: int64
```

Out[14]:
```
CRIM       20
ZN         20
INDUS      20
CHAS       20
NOX         0
RM          0
AGE        20
DIS         0
RAD         0
TAX         0
PTRATIO     0
B           0
LSTAT      20
MEDV        0
dtype: int64
```

(506, 14)

Out[24]:

	count	mean	std	min	25%	50%	75%	max
CRIM	506.0	3.611874	8.545770	0.00632	0.083235	0.29025	3.611874	88.9762
ZN	506.0	11.211934	22.921051	0.00000	0.000000	0.00000	11.211934	100.0000
INDUS	506.0	11.083992	6.699165	0.46000	5.190000	9.90000	18.100000	27.7400
CHAS	506.0	0.067194	0.250605	0.00000	0.000000	0.00000	0.000000	1.0000
NOX	506.0	0.554695	0.115878	0.38500	0.449000	0.53800	0.624000	0.8710
RM	506.0	6.284634	0.702617	3.56100	5.885500	6.20850	6.623500	8.7800
AGE	506.0	68.845850	27.486962	2.90000	45.925000	76.80000	93.575000	100.0000
DIS	506.0	3.795043	2.105710	1.12960	2.100175	3.20745	5.188425	12.1265
RAD	506.0	9.549407	8.707259	1.00000	4.000000	5.00000	24.000000	24.0000
TAX	506.0	408.237154	168.537116	187.00000	279.000000	330.00000	666.000000	711.0000
PTRATIO	506.0	18.455534	2.164946	12.60000	17.400000	19.05000	20.200000	22.0000
B	506.0	356.674032	91.294864	0.32000	375.377500	391.44000	396.225000	396.9000
LSTAT	506.0	12.664625	7.017219	1.73000	7.230000	11.43000	16.570000	37.9700
MEDV	506.0	22.532806	9.197104	5.00000	17.025000	21.20000	25.000000	50.0000

Out[21]:
```
CRIM       0
ZN         0
INDUS      0
CHAS       0
NOX        0
RM         0
AGE        0
DIS        0
RAD        0
TAX        0
PTRATIO    0
B          0
LSTAT      0
MEDV       0
dtype: int64
```

Out[13]:
```
array([ 18. ,   0. ,  12.5,  75. ,  21. ,  90. ,  85. , 100. ,  25. ,
        17.5,  80. ,   nan,  28. ,  45. ,  60. ,  95. ,  82.5,  30. ,
        22. ,  20. ,  40. ,  55. ,  52.5,  70. ,  34. ,  33. ,  35. ])
```

Out[22]:

	CRIM	ZN	INDUS	CHAS	NOX	RM	AGE	DIS	RAD	TAX	PTRATIO	B	LSTAT	MEDV
0	0.00632	18.0	2.31	0.0	0.538	6.575	65.2	4.0900	1	296	15.3	396.90	4.98	24.0
1	0.02731	0.0	7.07	0.0	0.469	6.421	78.9	4.9671	2	242	17.8	396.90	9.14	21.6
2	0.02729	0.0	7.07	0.0	0.469	7.185	61.1	4.9671	2	242	17.8	392.83	4.03	34.7
3	0.03237	0.0	2.18	0.0	0.458	6.998	45.8	6.0622	3	222	18.7	394.63	2.94	33.4
4	0.06905	0.0	2.18	0.0	0.458	7.147	54.2	6.0622	3	222	18.7	396.90	11.43	36.2

Out[32]:
```
array([28.99719439, 36.56606809, 14.51022803, 25.02572187, 18.42885474,
       23.02785726, 17.95437605, 14.5769479 , 22.14430832, 20.84584632,
       25.15283588, 18.55925182, -5.69168071, 21.71242445, 19.06845707,
       25.94275348, 19.70991322,  5.85916505, 40.9608103 , 17.21528576,
       25.36124981, 30.26007975, 11.78589412, 23.48106943, 17.35338161,
       15.13896898, 21.61919056, 14.51459386, 23.17246824, 19.40914754,
       22.56164985, 25.21208496, 25.88782605, 16.68297496, 16.44747174,
       16.65894826, 31.10314158, 20.25199803, 24.38567686, 23.09800032,
       14.47721796, 32.36053979, 43.01157914, 17.61473728, 27.60723089,
       16.43366912, 14.25719607, 26.0854729 , 19.75853278, 30.15142187,
       21.01932313, 33.72128781, 16.39180467, 26.36438908, 39.75793372,
       22.02419633, 18.39453126, 32.81854401, 25.370573  , 12.82224665,
       22.76128341, 30.73955199, 31.34386371, 16.27681305, 20.36945226,
       17.23156773, 20.15406451, 26.15613066, 30.92791361, 11.42177654,
       20.89590447, 26.58633798, 11.01176073, 12.76831709, 23.73870867,
        6.37180464, 21.6922679 , 41.74800223, 18.64423785,  8.82325704,
       20.96406016, 13.20179007, 20.99146149,  9.17404063, 23.0011185 ,
       32.41062673, 18.99778065, 25.56204885, 28.67383635, 19.76918944,
       25.94842754,  5.77674362, 19.514431  , 15.22571165, 10.87671123,
       20.08359505, 23.77725749,  0.05985008, 13.56333825, 16.1215622 ,
       22.74200442, 24.36218289])
```

Out[31]:

LinearRegression

LinearRegression()

Mean Squared Error:24.944071172175573

Root Mean Squared Error:4.9944039856799 3

R-squared:0.6598556613717497