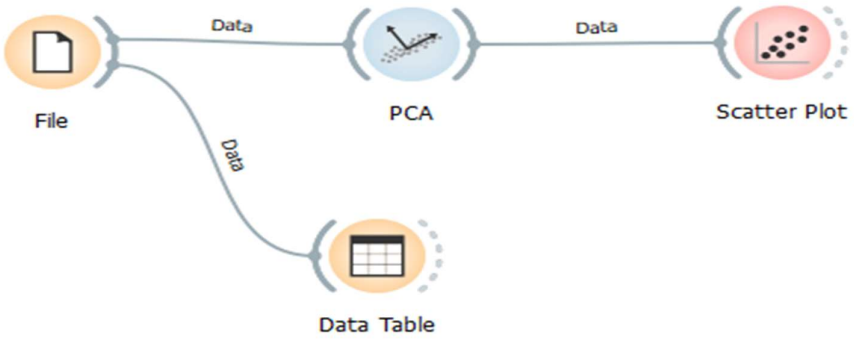


File - Orange

Source

File: datasets\housing.tab ... Reload

URL:

File Type

Automatically detect type

Info

Housing dataset
Data collected by the U.S Census Service concerning housing in Boston.

506 instances
13 features (no missing values)
Regression; numerical class (no missing values)
0 meta attributes

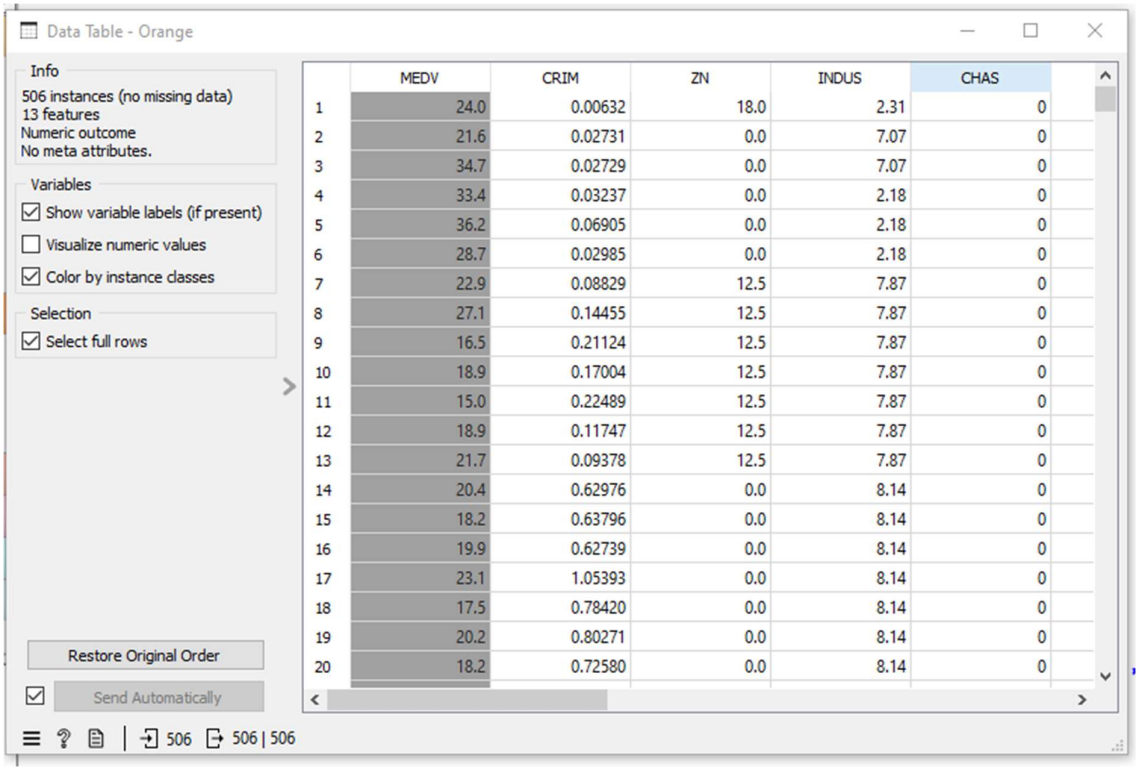
Columns (Double click to edit)

	Name	Type	Role	Values
1	CRIM	numeric	feature	
2	ZN	numeric	feature	
3	INDUS	numeric	feature	
4	CHAS	numeric	feature	
5	NOX	numeric	feature	
6	RM	numeric	feature	

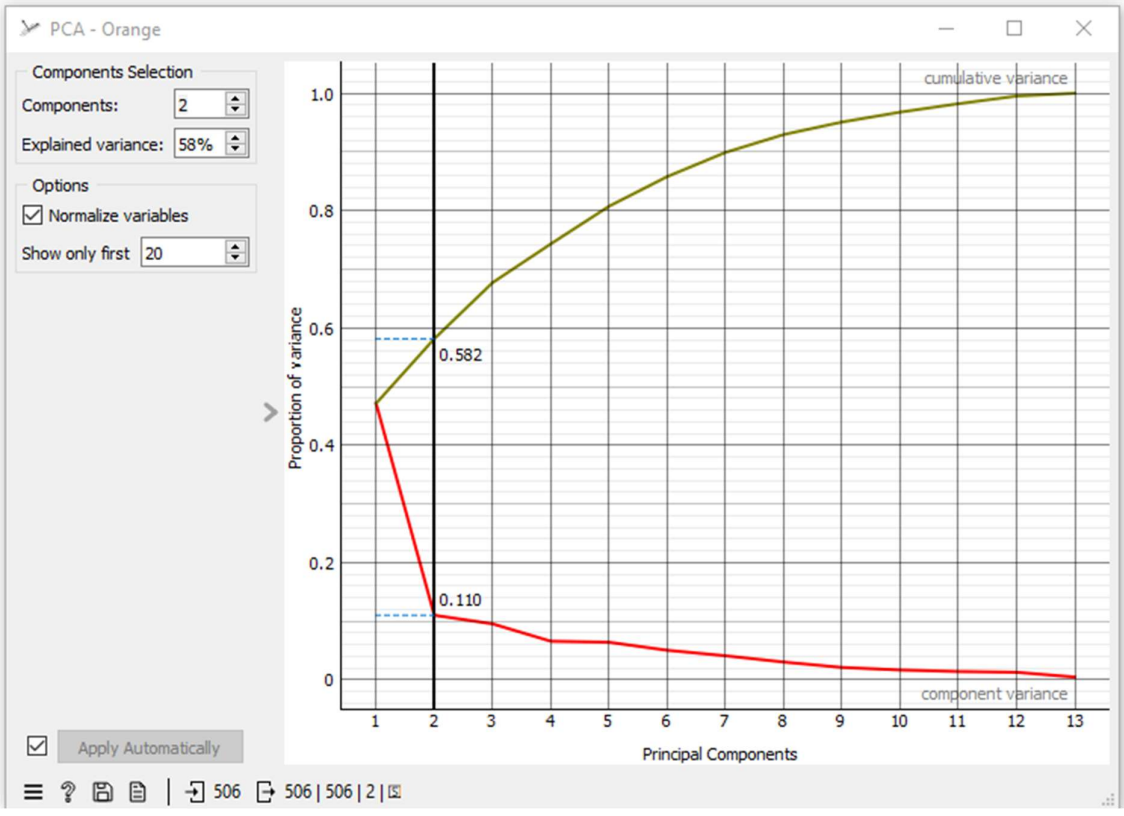
Reset Apply

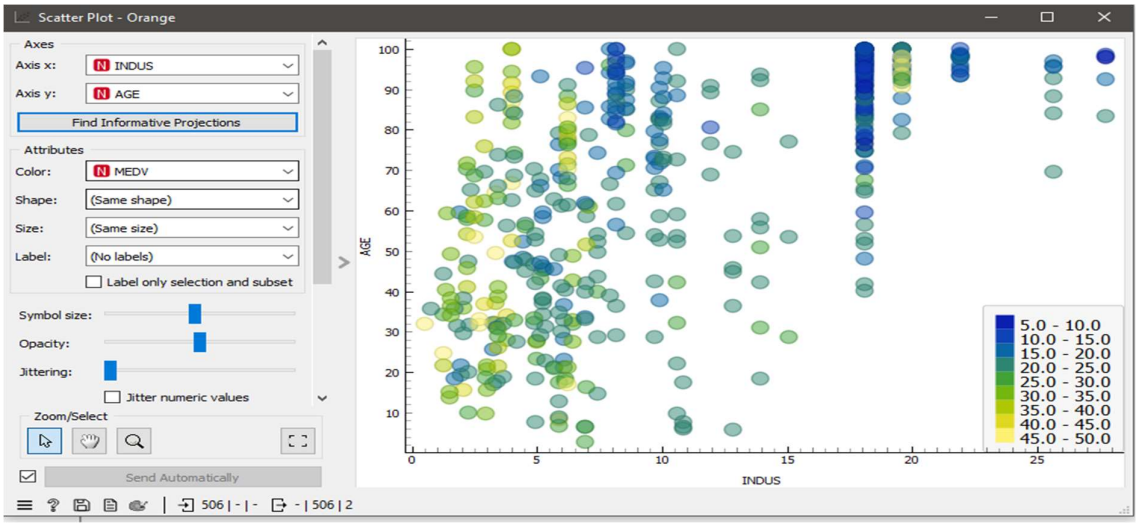
Browse documentation datasets

506



	MEDV	CRIM	ZN	INDUS	CHAS
1	24.0	0.00632	18.0	2.31	0
2	21.6	0.02731	0.0	7.07	0
3	34.7	0.02729	0.0	7.07	0
4	33.4	0.03237	0.0	2.18	0
5	36.2	0.06905	0.0	2.18	0
6	28.7	0.02985	0.0	2.18	0
7	22.9	0.08829	12.5	7.87	0
8	27.1	0.14455	12.5	7.87	0
9	16.5	0.21124	12.5	7.87	0
10	18.9	0.17004	12.5	7.87	0
11	15.0	0.22489	12.5	7.87	0
12	18.9	0.11747	12.5	7.87	0
13	21.7	0.09378	12.5	7.87	0
14	20.4	0.62976	0.0	8.14	0
15	18.2	0.63796	0.0	8.14	0
16	19.9	0.62739	0.0	8.14	0
17	23.1	1.05393	0.0	8.14	0
18	17.5	0.78420	0.0	8.14	0
19	20.2	0.80271	0.0	8.14	0
20	18.2	0.72580	0.0	8.14	0





haar_wavelet_transform.py - Notepad

File Edit Format View Help

```
import numpy as np

def haar_wavelet_transform(data):
    n = len(data)
    output = np.copy(data)
    step = 1

    while step < n:
        for i in range(0, n, 2 * step):
            for j in range(step):
                avg = (output[i + j] + output[i + j + step]) / 2
                diff = (output[i + j] - output[i + j + step]) / 2
                output[i + j] = avg
                output[i + j + step] = diff
        step *= 2

    return output

# Example usage
data = [4, 6, 10, 12, 14, 16, 18, 20]
transformed_data = haar_wavelet_transform(data)
print("Transformed Data:", transformed_data)
```


Command Prompt
C:\Users\user>pip install numpy
Requirement already satisfied: numpy in c:\users\user\appdata\local\programs\python\python312\lib\site-packages (2.1.1)
C:\Users\user>python --version
Python 3.12.6
C:\Users\user>python haar_wavelet_transform.py
Transformed Data: [12 -1 -2 0 -4 0 0 0]
C:\Users\user>