different_shapes

February 6, 2025

1 Scatterplot with Different Shaped Markers

In this example we demonstrate how to use different shapes of markers on our scatterplot.

[1]:
```
import pandas as pd
import matplotlib.pyplot as plt
from random import random
```

[2]:
```
def random_values(count=50):
    """
    Returns a list of random numbers between 0 (inclusive) and 1 (exclusive).
    By default, the function returns a list of 5 numbers.
    """
    return [random() for _ in range(count)]
```

[3]:
```
df = pd.DataFrame()
```

[4]:
```
df['X'] = random_values()
df['Y'] = random_values()
```

[5]:
```
df['Shape'] = ['circle' if r < 0.5 else 'triangle'
               for r in random_values()]
```

[6]:
```
df.head()
```

[6]:

	X	Y	Shape
0	0.353158	0.920833	circle
1	0.630041	0.181577	triangle
2	0.267498	0.857622	circle
3	0.883214	0.101127	triangle
4	0.670852	0.244529	circle

[7]:
```
circle_df = df[df['Shape'] == 'circle']

circle_df.head()
```

[7]:

	X	Y	Shape
0	0.353158	0.920833	circle

```
2  0.267498  0.857622  circle
4  0.670852  0.244529  circle
5  0.864841  0.513144  circle
6  0.526968  0.266310  circle
```

[8]:
```
len(circle_df)
```

[8]:
```
28
```

[9]:
```
triangle_df = df[df['Shape'] == 'triangle']

triangle_df.head()
```

[9]:
```
          X         Y     Shape
1  0.630041  0.181577  triangle
3  0.883214  0.101127  triangle
7  0.731541  0.995617  triangle
8  0.547987  0.520946  triangle
9  0.789916  0.110748  triangle
```

[10]:
```
len(triangle_df)
```

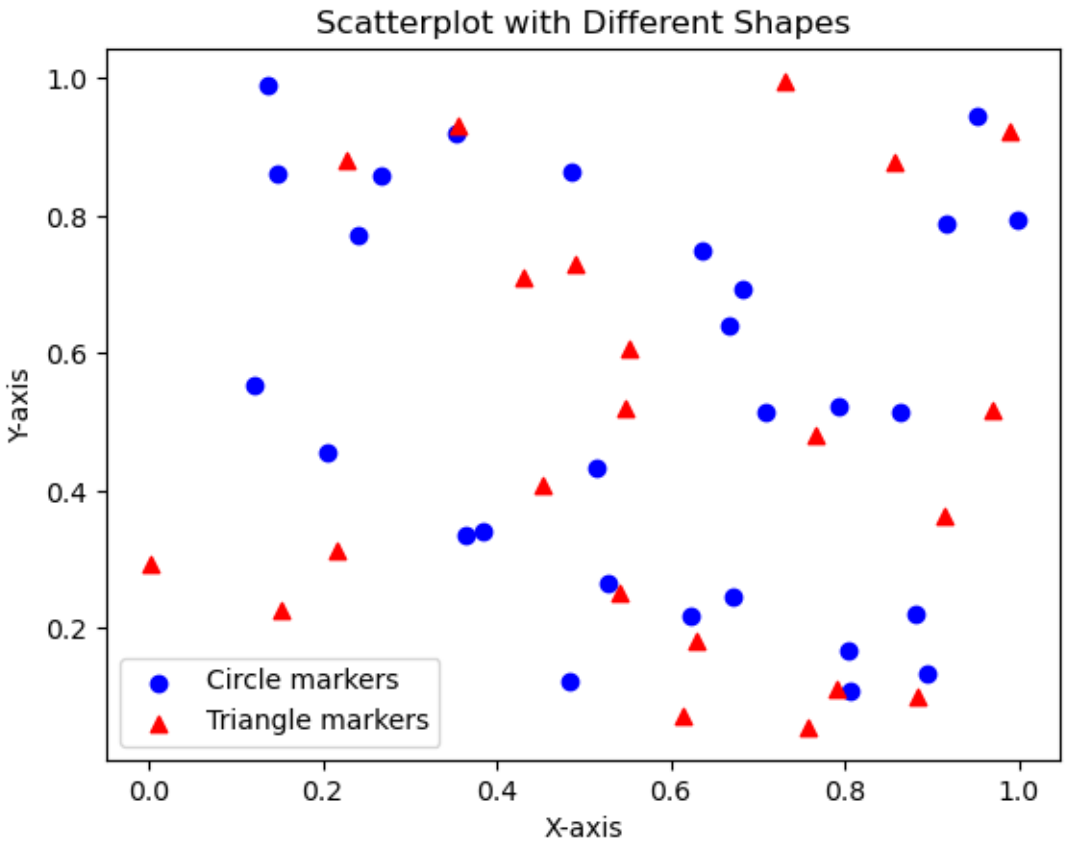
[10]:
```
22
```

[11]:
```
# Plot the circles
plt.scatter(x=circle_df['X'],
            y=circle_df['Y'],
            marker='o',
            color='blue',
            label='Circle markers')

# Plot the triangles
plt.scatter(x=triangle_df['X'],
            y=triangle_df['Y'],
            marker='^',
            color='red',
            label='Triangle markers')

# Add labels and legend
plt.title("Scatterplot with Different Shapes")
plt.xlabel("X-axis")
plt.ylabel("Y-axis")
plt.legend()

plt.show()
```


Scatterplot with Different Shapes
1.0
0.8
0.6
0.4
0.2
Y-axis
0.0
0.2
0.4
0.6
0.8
1.0
X-axis
Circle markers
Triangle markers