Python Tutorials

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Matplotlib scatterplot

Matplot has a built-in function to create *scatterplots* called scatter(). A scatter plot is a type of plot that shows the data as a collection of points. The position of a point depends on its two-dimensional value, where each value is a position on either the horizontal or vertical dimension.

Related course

Matplotlib Intro with Python

Scatterplot example

Example:

```
import numpy as np
import matplotlib.pyplot as plt

# Create data
N = 500
x = np.random.rand(N)
y = np.random.rand(N)
colors = (0,0,0)
area = np.pi*3

# Plot
plt.scatter(x, y, s=area, c=colors, alpha=0.5)
plt.title('Scatter plot pythonspot.com')
plt.xlabel('x')
plt.ylabel('y')
plt.show()
```

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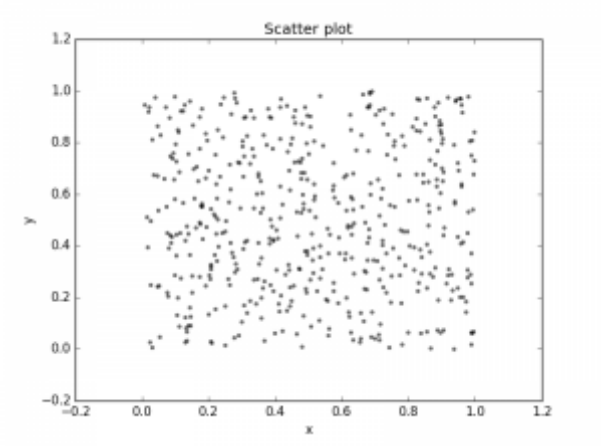
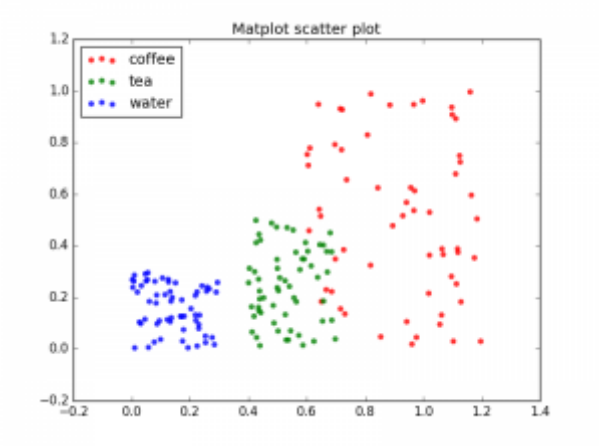


Scatter plot created with Matplotlib

Scatter plot with groups

Data can be classified in several groups. The code below demo nstrates that:

```
import numpy as np
import matplotlib.pyplot as plt

# Create data
N = 60
g1 = (0.6 + 0.6 * np.random.rand(N), np.random.rand(N))
g2 = (0.4+0.3 * np.random.rand(N), 0.5*np.random.rand(N))
g3 = (0.3*np.random.rand(N),0.3*np.random.rand(N))

data = (g1, g2, g3)
colors = ("red", "green", "blue")
groups = ("coffee", "tea", "water")

# Create plot
fig = plt.figure()
ax = fig.add_subplot(1, 1, 1, axisbg="1.0")

for data, color, group in zip(data, colors, groups):
x, y = data
ax.scatter(x, y, alpha=0.8, c=color, edgecolors='none', s=30,

plt.title('Matplot scatter plot')
plt.legend(loc=2)
plt.show()
```



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