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Boxplot Demo

Example boxplot code

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

# Fixing random state for reproducibility
np.random.seed(19680801)

# fake up some data
spread = np.random.rand(50) * 100
center = np.ones(25) * 50
flier_high = np.random.rand(10) * 100 + 100
flier_low = np.random.rand(10) * -100
data = np.concatenate((spread, center, flier_high, flier_low),
```

```
fig1, ax1 = plt.subplots()
ax1.set_title('Basic Plot')
ax1.boxplot(data)
```

powered by NumFOCUS

Depsy 100th percentile

Travis-CI: [build](#) [canceled](#)

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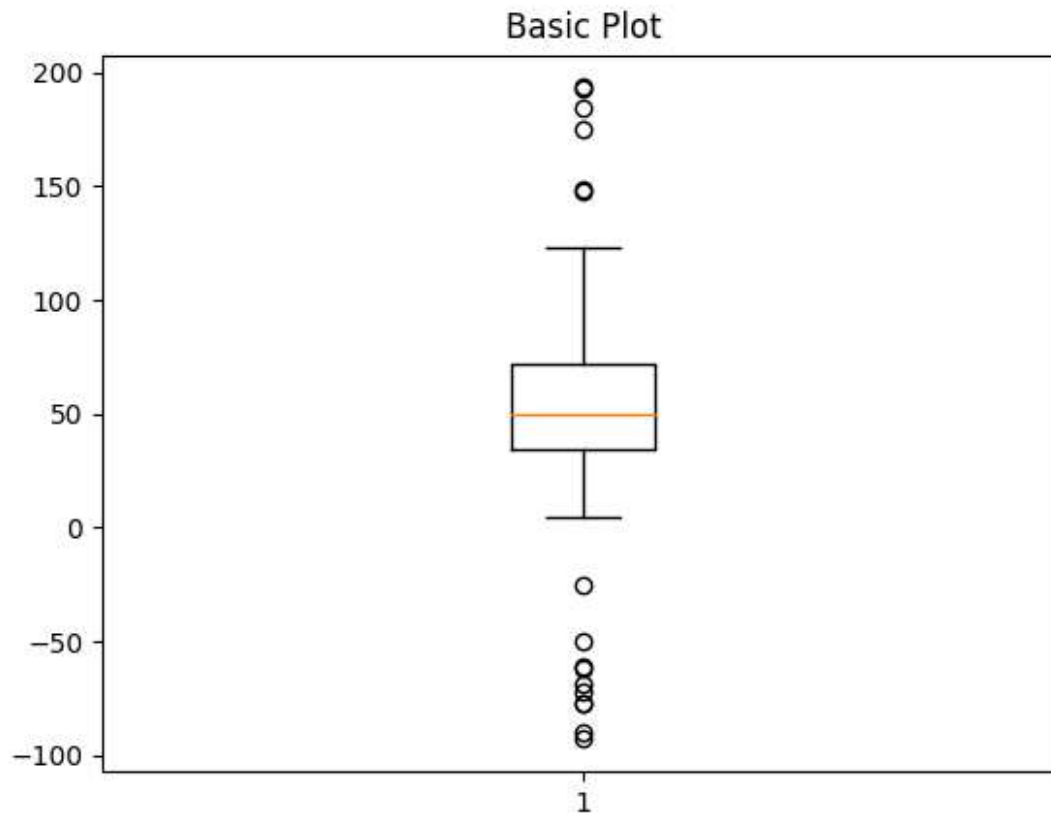
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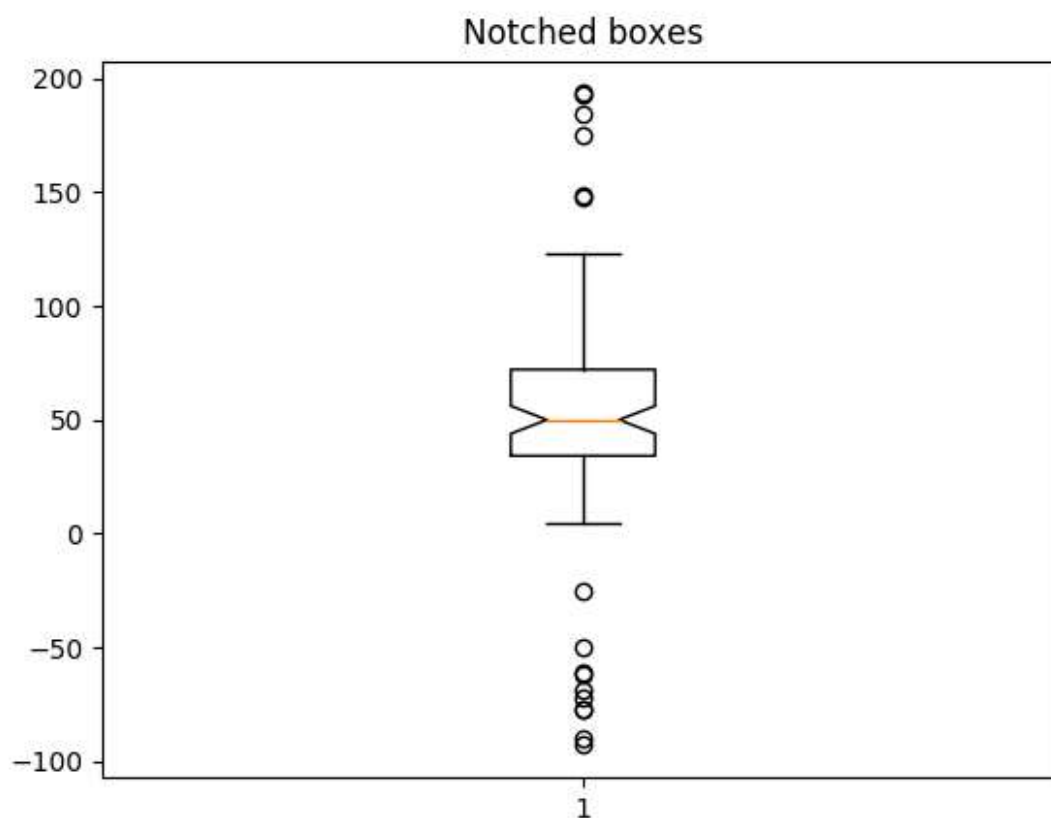
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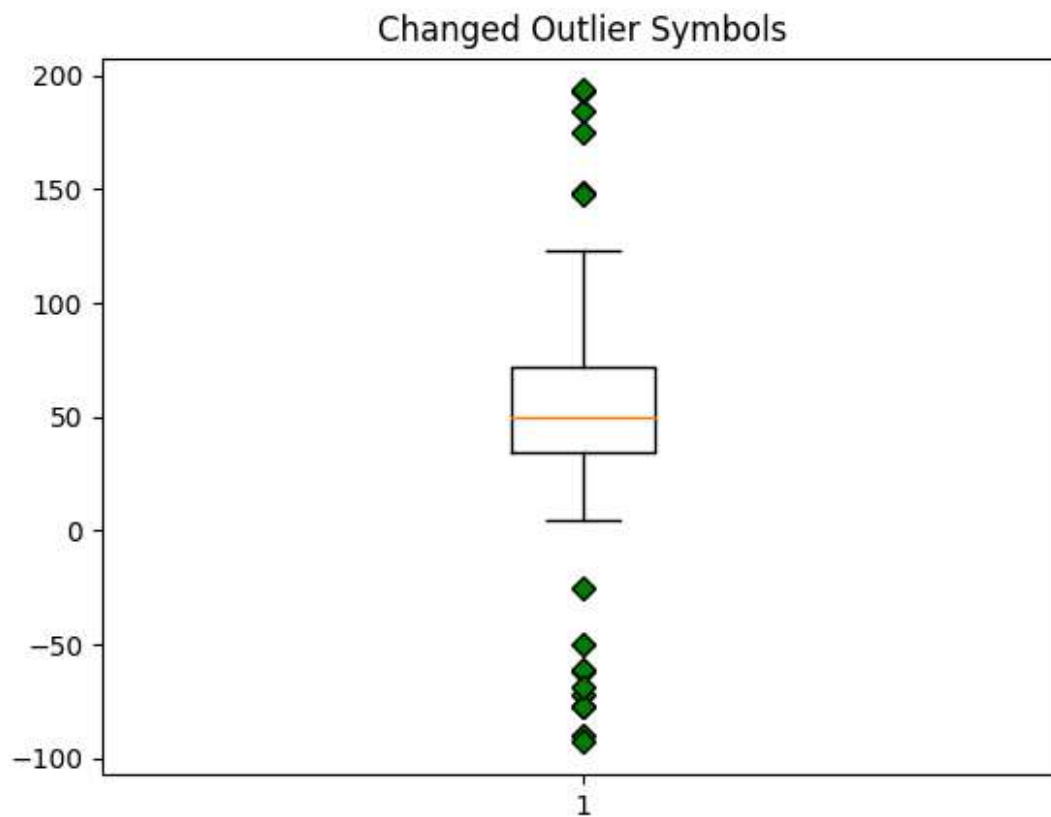
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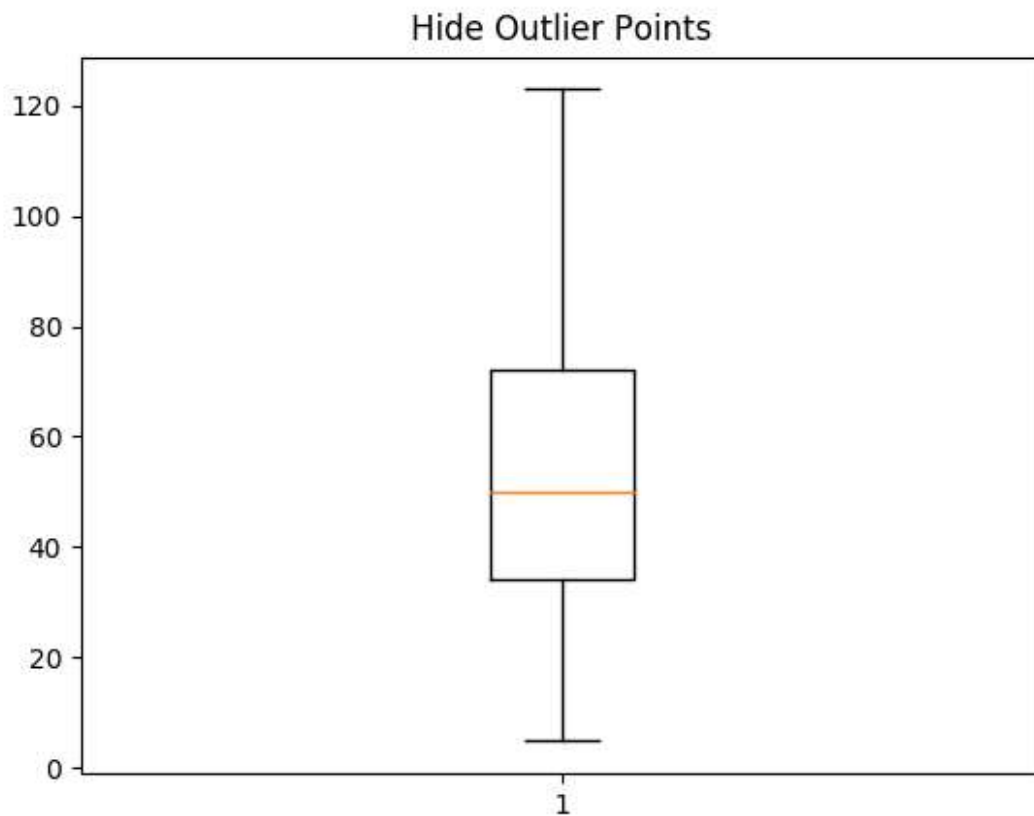
```
fig2, ax2 = plt.subplots()
ax2.set_title('Notched boxes')
ax2.boxplot(data, notch=True)
```



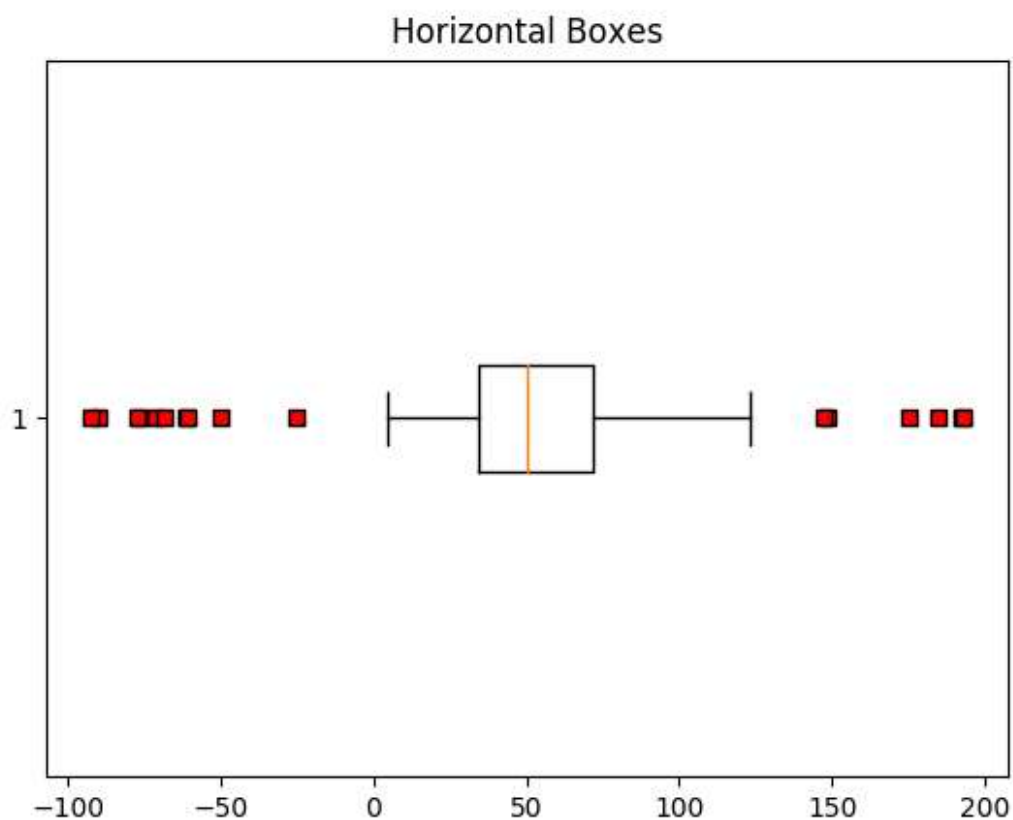
```
green_diamond = dict(markerfacecolor='g', marker='D')  
fig3, ax3 = plt.subplots()  
ax3.set_title('Changed Outlier Symbols')  
ax3.boxplot(data, flierprops=green_diamond)
```



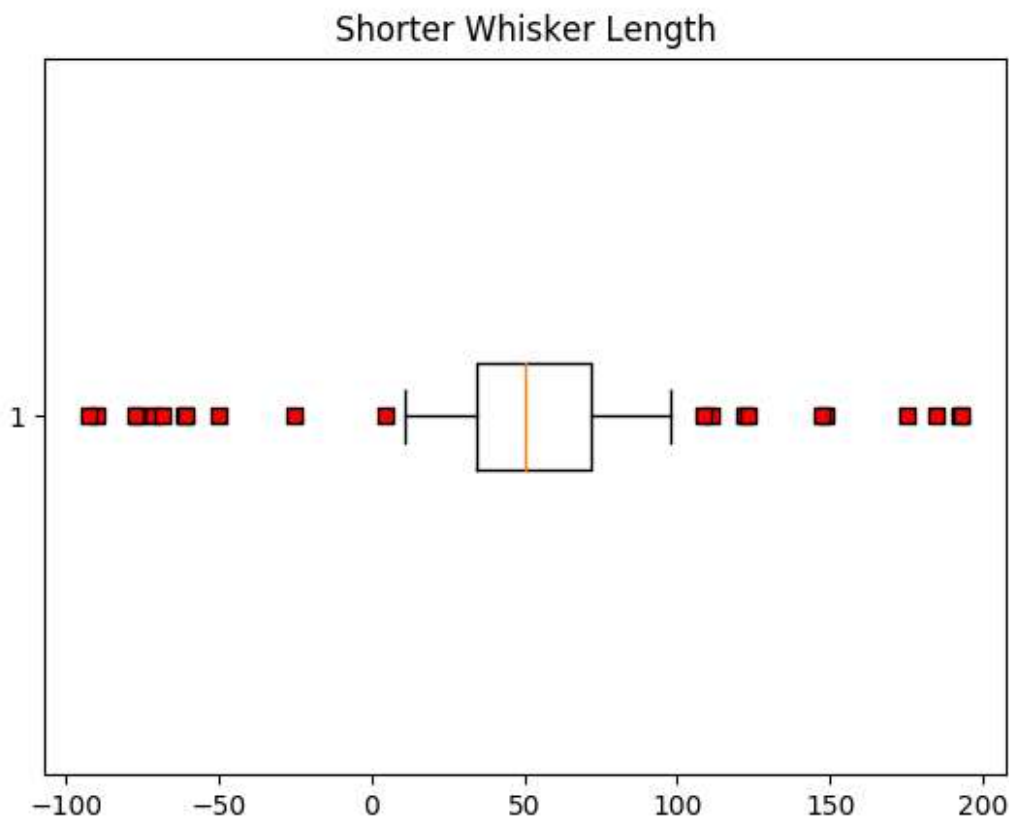
```
fig4, ax4 = plt.subplots()  
ax4.set_title('Hide Outlier Points')  
ax4.boxplot(data, showfliers=False)
```



```
red_square = dict(markerfacecolor='r', marker='s')  
fig5, ax5 = plt.subplots()  
ax5.set_title('Horizontal Boxes')  
ax5.boxplot(data, vert=False, flierprops=red_square)
```



```
fig6, ax6 = plt.subplots()
ax6.set_title('Shorter Whisker Length')
ax6.boxplot(data, flierprops=red_square, vert=False, whis=0.75)
```



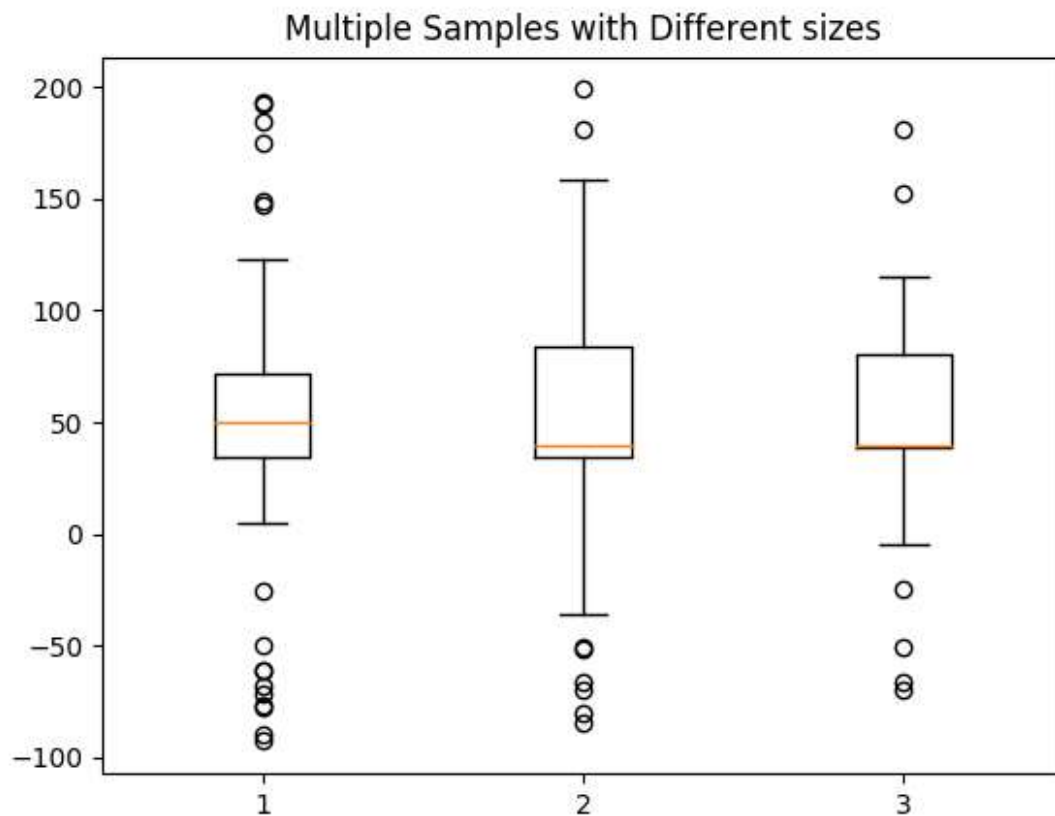
Fake up some more data

```
spread = np.random.rand(50) * 100
center = np.ones(25) * 40
flier_high = np.random.rand(10) * 100 + 100
flier_low = np.random.rand(10) * -100
d2 = np.concatenate((spread, center, flier_high, flier_low), 0)
data.shape = (-1, 1)
d2.shape = (-1, 1)
```

Making a 2-D array only works if all the columns are the same length. If they are not, then use a list instead. This is actually more efficient because boxplot converts a 2-D array into a list of vectors internally anyway.

```
data = [data, d2, d2[:,2,0]]
fig7, ax7 = plt.subplots()
ax7.set_title('Multiple Samples with Different sizes')
ax7.boxplot(data)

plt.show()
```



Total running time of the script: (0 minutes 0.218 seconds)

**Download Python source
code:** `boxplot_demo.py`

**Download Jupyter
notebook:**
`boxplot_demo.ipynb`

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