

# How can I place the legend outside of a plot in Matplotlib?

Authored by  
**stats writer**

April 19, 2024

## RECOMMENDED CITATION

stats writer (2024). *How can I place the legend outside of a plot in Matplotlib?*.

PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=136906>

The process of placing the legend outside of a plot in Matplotlib involves using the "bbox\_to\_anchor" parameter to specify the location of the legend relative to the plot. This can be achieved by providing specific coordinates or using predefined values such as "upper right", "lower left", etc. Additionally, the "loc" parameter can be used to further adjust the positioning of the legend. With these parameters, the legend can be easily placed outside of the plot area, providing a more organized and visually appealing representation of the data.

## Place the Legend Outside of a Matplotlib Plot

Often you may want to place the legend of a Matplotlib plot outside of the actual plot.

Fortunately this is easy to do using the `matplotlib.pyplot.legend()` function combined with the `bbox_to_anchor` argument.

This tutorial shows several examples of how to use this function in practice.

### Example 1: Place Legend in Top Right Corner

The following code shows how to place the legend in the top right corner outside of a Matplotlib plot:

```
import matplotlib.pyplot as plt
```

```
#create plot
```

```
plt.subplot(211)
```

```
plt.plot(, label="First Data")
```

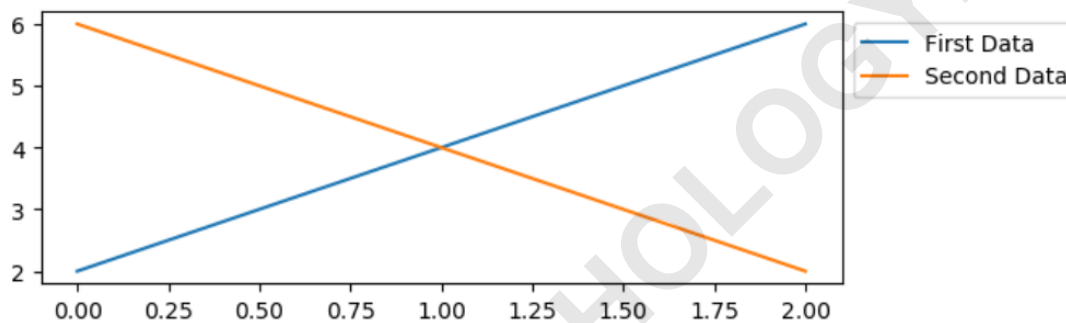
```
plt.plot(, label="Second Data")
```

```
#place legend in top right corner
```

```
plt.legend(bbox_to_anchor=(1,1), loc="upper left")
```

```
#show plot
```

```
plt.show()
```



Note that the `loc` argument tells Matplotlib to place the upper left corner of the legend line at the  $(x,y)$  coordinates of  $(1,1)$  in the plot.

Example 2: Place Legend in Bottom Right Corner

The following code shows how to place the legend in the bottom right corner outside of a Matplotlib plot:

```
import matplotlib.pyplot as plt
```

```
#create plot
```

```
plt.subplot(211)
```

```
plt.plot(, label="First Data")
```

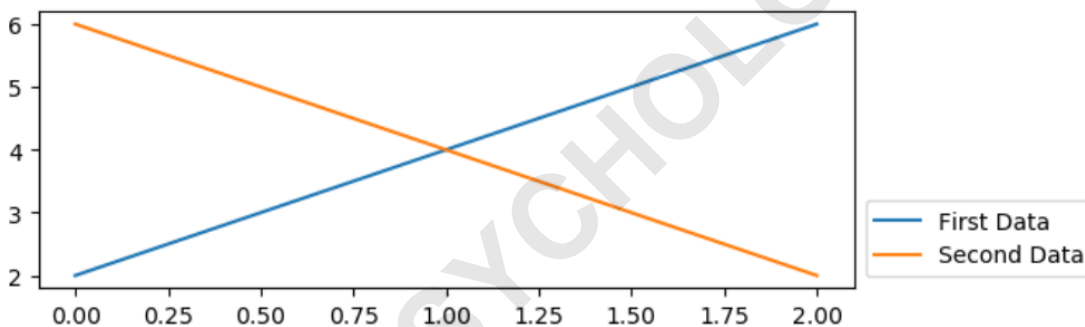
```
plt.plot(, label="Second Data")
```

```
#place legend in top right corner
```

```
plt.legend(bbox_to_anchor=(1,0), loc="lower left")
```

```
#show plot
```

```
plt.show()
```



Note that the `loc` argument tells Matplotlib to place the lower left corner of the legend line at the  $(x,y)$  coordinates of  $(1,0)$  in the plot.

### Example 3: Place Legend Above Plot

The following code shows how to place the legend above the Matplotlib plot:

```
import matplotlib.pyplot as plt
```

```
#create plot
```

```
plt.subplot(211)
```

```
plt.plot(, label="First Data")
```

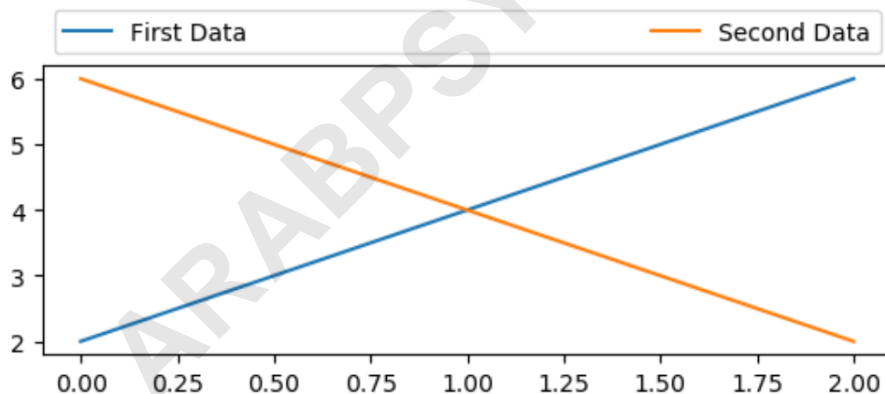
```
plt.plot(, label="Second Data")
```

```
#place legend above plot
```

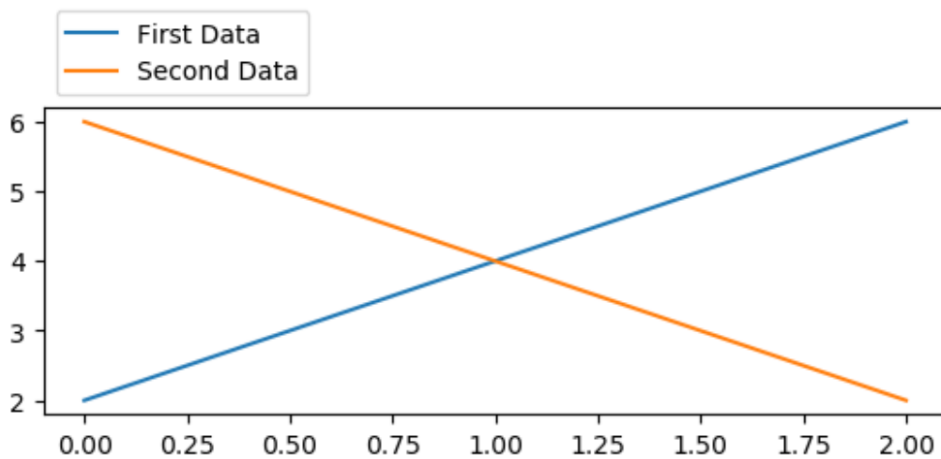
```
plt.legend(bbox_to_anchor=(0, 1, 1, 0), loc="lower left",  
mode="expand", ncol=2)
```

```
#show plot
```

```
plt.show()
```



**We could also leave out the mode and ncol arguments if we simply want to place the legend in the top left corner above the plot:**



**The following tutorials explain how to perform other common tasks in Matplotlib:**

**[How to Change Font Sizes on a Matplotlib Plot](#)**

**[How to Remove Ticks from Matplotlib Plots](#)**

**[How to Show Gridlines on Matplotlib Plots](#)**