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import matplotlib.pyplot as plt
import numpy as np
*** Basic Matplotlib library Sheet: ***
x = np.arange(0,10)
y = 2*x
a = np.linspace(0,10,11)
b = a**4
print(x)
print(y)
print(a)
print(b)
print("Creating First simple Plot: ")
plt.plot(x,y)
plt.xlabel("X Label")
plt.ylabel("Y Label")
print("Limiting display of X and Y on the Plot: ")
plt.xlim(0,6)
plt.ylim(0,15)
plt.title("First simple Plot")
print("Save the plot: ")
plt.savefig('simple_plot.png')
print("Display the Plot: ")
plt.show()
#>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
print("Creating an empty Canvas: ")
fig = plt.figure(figsize=(10,5),dpi=72) # figsize=(10,10)
print("Creating 2 plots on 2 axes on 1 figure: ")
axes = fig.add_axes([0.07,0.07,0.95,0.95]) # start and end points x and y
axes.plot(a,b)
axes2 = fig.add_axes([0.3,0.4,0.4,.4]) # start and end points x and y
axes2.plot(x,y)
axes2.set_xlim(0,6)
axes2.set_ylim(0,15)
axes2.set_xlabel("Internal Plot X Label")
axes2.set_ylabel("Internal Plot y Label")
axes2.set_title("Internal Plot")
plt.show()
plt.savefig('double_plot.png',bbox_inches='tight')
#>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>
print("Creating several plots by subPlots: ")
fig,axes = plt.subplots(nrows=2,ncols=2, dpi=72) # figsize=(4,6) or:
fig.set_figwidth(10)
fig.set_figheight(5)
print(axes.shape)
axes[0][0].plot(x,y)
axes[1][0].plot(a,b)
axes[1][0].set_title("Plot in Row 1 Column 0")
print("use only subplots_adjust or tight_layout: ")
fig.subplots_adjust(wspace=0.9,hspace=0.9)
#plt.tight_layout()
fig.suptitle("Figure Level Title")
fig.savefig("new_subplots_plot.png",bbox_inches='tight')
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[illegible]