***Improving Plot Aesthetics***

*Hiding Tick Marks, axis-labels and Displaying Selected axis-label values:*

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| fig = plt.figure()    plt.plot(women\_degrees['Year'], women\_degrees['Biology'], label='Women', c='blue')  plt.plot(women\_degrees['Year'], 100 - women\_degrees['Biology'], c='green', label='Men')    # ax./plt.tick\_params (loc= ‘off’) will hide the ticks  plt.tick\_params(top = "off", bottom = 'off', right = 'off', left = 'off', labelbotom = False)  plt.yticks([30, 70]) # Or axes.set\_yticks([30, 70])  plt.title("Percentage of Biology Degrees Awarded By Gender")  plt.legend(loc="upper right")  plt.show() |

*Hiding Spines:*

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| fig, ax = plt.subplots()  ax.plot(women\_degrees['Year'], women\_degrees['Biology'], label='Women')  ax.plot(women\_degrees['Year'], 100-women\_degrees['Biology'], label='Men')  ax.tick\_params(bottom="off", top="off", left="off", right="off")  # axes.spines(loc).set\_visible(False) will hide the borders.spines of the axes and plot  ax.spines['right'].set\_visible(False)  ax.spines['top'].set\_visible(False)  ax.spines['bottom'].set\_visible(False)  ax.spines['left'].set\_visible(False)  # Another Way to hide spines in one go  for key,spine in ax.spines.items():  spine.set\_visible(False)    ax.legend(loc='upper right')  ax.set\_title('Percentage of Biology Degrees Awarded By Gender')  plt.show() |

***Color, Layout and Annotations***

*Setting Color of Line Using RGB:*

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| fig = plt.figure(figsize=(12, 12))    for sp in range(0,4):  ax = fig.add\_subplot(2,2,sp+1)  # The color for each line is assigned here.  cb\_dark\_blue = (0/255, 107/255, 164/255)  cb\_orange = (255/255, 128/255, 14/255)  ax.plot(women\_degrees['Year'], women\_degrees[major\_cats[sp]], c=cb\_dark\_blue, label='Women')  ax.plot(women\_degrees['Year'], 100-women\_degrees[major\_cats[sp]], c=cb\_orange, label='Men')  for key,spine in ax.spines.items():  spine.set\_visible(False)  ax.set\_xlim(1968, 2011)  ax.set\_ylim(0,100)  ax.set\_title(major\_cats[sp])  ax.tick\_params(bottom="off", top="off", left="off", right="off")    plt.legend(loc='upper right')  plt.show() |

*Setting Line Width:*

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| cb\_dark\_blue = (0/255, 107/255, 164/255)  cb\_orange = (255/255, 128/255, 14/255)    fig = plt.figure(figsize=(12, 12))    for sp in range(0,4):  ax = fig.add\_subplot(2,2,sp+1)  # Set the line width when specifying how each line should look.  ax.plot(women\_degrees['Year'], women\_degrees[major\_cats[sp]], c=cb\_dark\_blue, label='Women', linewidth=3)  ax.plot(women\_degrees['Year'], 100-women\_degrees[major\_cats[sp]], c=cb\_orange, label='Men', linewidth=3)  for key,spine in ax.spines.items():  spine.set\_visible(False)  ax.set\_xlim(1968, 2011)  ax.set\_ylim(0,100)  ax.set\_title(major\_cats[sp])  ax.tick\_params(bottom="off", top="off", left="off", right="off")    plt.legend(loc='upper right')  plt.show() |

*Annotations in Matlpotlib:*

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| fig = plt.figure(figsize=(18, 3))    for sp in range(0,6):  ax = fig.add\_subplot(1,6,sp+1)  ax.plot(women\_degrees['Year'], women\_degrees[stem\_cats[sp]], c=cb\_dark\_blue, label='Women', linewidth=3)  ax.plot(women\_degrees['Year'], 100-women\_degrees[stem\_cats[sp]], c=cb\_orange, label='Men', linewidth=3)  # axes.text(x-cordinate, y-cordinate, string\_annotation)  if sp == 0:  ax.text(2005, 87, "Men")  ax.text(2002, 8, "Women")  if sp == 5:  ax.text(2005, 62, "Men")  ax.text(2001, 35, "Women")    for key,spine in ax.spines.items():  spine.set\_visible(False)  ax.set\_xlim(1968, 2011)  ax.set\_ylim(0,100)  ax.set\_title(stem\_cats[sp])  ax.tick\_params(bottom="off", top="off", left="off", right="off")  plt.show() |

***Adding Lines, Exporting to a File***

*Adding a Horizontal Line and Exporting Plot as an Image:*

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| stem\_cats = ['Engineering', 'Computer Science', 'Psychology', 'Biology',  'Physical Sciences', 'Math and Statistics']  fig = plt.figure(figsize=(15, 18))    for sp in range(6):  ax = fig.add\_subplot(6, 3, (sp\*3)+1)  ax.plot(women\_degrees['Year'], women\_degrees[stem\_cats[sp]], c=cb\_dark\_blue, label='Women', linewidth=3)  ax.plot(women\_degrees['Year'], 100-women\_degrees[stem\_cats[sp]], c=cb\_orange, label='Men', linewidth=3)  for k, v in ax.spines.items():  spine.set\_visible(False)  ax.set\_xlim(1968, 2011)  ax.set\_ylim(0,100)  ax.set\_title(stem\_cats[sp])  ax.set\_yticks([0,100])  # Axes.axhline (Adds a Horizonal Line, and alpha is the transparency level (0 < alpha < 1) )  ax.axhline(50, c=(171/255, 171/255, 171/255), alpha=0.3)  ax.tick\_params(bottom=False, top=False, left=False, right=False, labelbottom=False)    if sp == 0:  ax.text(2006, 87, 'Men')  ax.text(2003, 8, 'Women')  elif sp == 5:  ax.text(2006, 62, 'Men')  ax.text(2003, 35, 'Women')  ax.tick\_params(labelbottom=True)  # plt.savefig(<filename>) saves file to the same folder where notebook is located  plt.savefig('gender\_degrees.png')  plt.show() |