

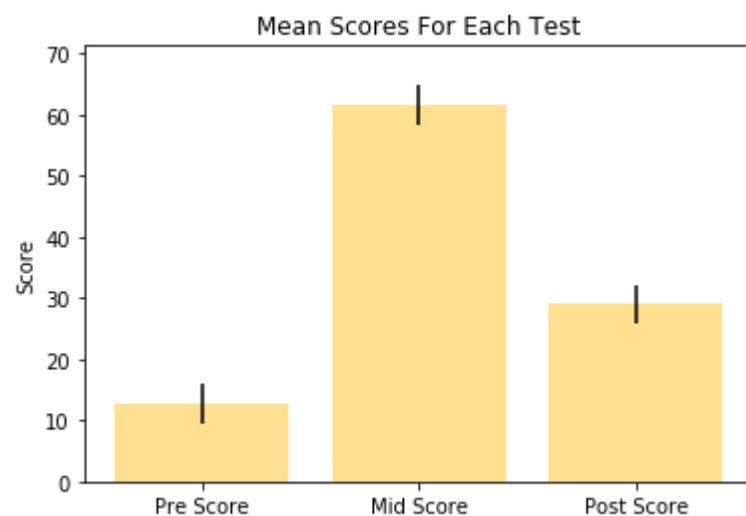
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In [6]: ## How to generate BAR plot with variance
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In [7]: def Snippet_114():
print()
print(format('How to generate BAR plot with variance', '^82'))
import warnings
warnings.filterwarnings("ignore")
# load libraries
import pandas as pd
import matplotlib.pyplot as plt
# Create dataframe
raw_data = {'first_name': ['Jason', 'Molly', 'Tina', 'Jake', 'Amy'],
            'pre_score': [4, 24, 31, 2, 3],
            'mid_score': [25, 94, 57, 62, 70],
            'post_score': [5, 43, 23, 23, 51]}
df = pd.DataFrame(raw_data, columns = ['first_name', 'pre_score',
                                     'mid_score', 'post_score'])

print(); print(df)
# Create a list of the mean scores for each variable
mean_values = [df['pre_score'].mean(),
              df['mid_score'].mean(),
              df['post_score'].mean()]
# Create a list of variances, which are set at .25 above and below the score
variance = [df['pre_score'].mean() * 0.25,
            df['pre_score'].mean() * 0.25,
            df['pre_score'].mean() * 0.25]
# Set the bar labels
bar_labels = ['Pre Score', 'Mid Score', 'Post Score']
# Create the x position of the bars
x_pos = list(range(len(bar_labels)))
# Create the plot bars
plt.bar(x_pos, mean_values, yerr=variance, align='center', color='#FFC222', alpha=0.5)
# set height of the y-axis
max_y = max(zip(mean_values, variance))
plt.ylim([0, (max_y[0] + max_y[1]) * 1.1])
# set axes labels and title
plt.ylabel('Score'); plt.xticks(x_pos, bar_labels);
plt.title('Mean Scores For Each Test'); plt.show()
Snippet_114()
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*****How to generate BAR plot with variance*****
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	first_name	pre_score	mid_score	post_score
0	Jason	4	25	5
1	Molly	24	94	43
2	Tina	31	57	23
3	Jake	2	62	23
4	Amy	3	70	51



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In [ ]:
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