APPLIED DATA SCIENCE

last question extra credit

code may help for averaging

year = 1994 + np.arange(by\_pter.num\_rows)/4

# This contains an array for all the men that showed signs of mental illness

Menbar1 = sub\_table[(sub\_table.gener == 'M') & (sub\_table.race == 'Black')]

# This contains an array for all the men that did not show signs of mental illness

Menbar2 = sub\_table[(sub\_table.gender == 'M') & (sub\_table.race == 'White')]

# This contains an array for all the women that showed signs of mental illness

Womenbar1 =sub\_table[(sub\_table.gender == 'F') & (sub\_table.race == 'Black')]

# This contains an array for all the men that did not show signs of mental illness

Womenbar2 = sub\_table[(sub\_table.gender == 'F') & (sub\_table.race == 'White')]

# Bar variable for men and women that showed signs of mental illness

SOMI = [len(Menbar1), len(Menbar2)] # SOMI - 'Signs of Mental Illness'

# Bar varibale for men and women that did not show signs of mental illness

NSOMI = [len(Womenbar1), len(Womenbar2)] # NSOMI - 'No Signs of Mental Illness'

bar\_width = 0.35

# Set position of bar on X axis

r1 = np.arange(len(SOMI)) # this variable contains the number of bar groups there will be, which is two

r2 = [x + bar\_width for x in r1]

# Make the plot

plt.bar(r1, SOMI, color='blue', width=bar\_width, edgecolor='black', linewidth = 1.2, label='Men')

plt.bar(r2, NSOMI, color='red', width=bar\_width, edgecolor='black',linewidth =1.2, label='Women')

# Add xticks on the middle of the group bars

plt.xlabel('Groups', fontweight='bold')

plt.ylabel('Death Count')

plt.xticks([r + 0.15 for r in range(len(SOMI))], ['SOMI','NSOMI'])

# Create legend & Show graphic

plt.title("People who did and did not show signs of mental illness")

plt.legend()

plt.show()

unemployment['PTER'] = unemployment['NEI-PTER'] - unemployment['NEI']

unemployment['Year'] = pd.DatetimeIndex(unemployment['Date']).year

pter\_over\_time = unemployment[['Year', 'PTER']]

pter\_over\_time

plt.plot(unemployment['Year'],unemployment['PTER'])

plt.title("PTER For All Time")

plt.xlabel('Year')

plt.ylabel("PTER")

plt.show()