Time Series Visualization

Part 1 Plot time series statistic

import matplotlib.pyplot as plt import numpy as np	Import Matplotlib та Numpy, the two libraries for charting and handling data, respectively
data = np.genfromtxt('daily-minimum-temperatures-in-me.csv', delimiter = ",", skip_header = 1) temps = data[:,1]	Read the data from the file Select only the temperature data
mean = np.nanmean(temps) std = np.nanstd(temps)	Compute the mean and standard deviation of the temperature values
plt.plot([0,len(temps)], [mean, mean], 'g-') plt.plot([0,len(temps)], [mean+std, mean+std], 'y-')	Plot the mean and standard deviation lines
plt.plot([0,len(temps)], [mean, mean], 'g-') plt.plot([0,len(temps)], [mean+std, mean+std], 'y-') plt.plot([0,len(temps)], [mean-std, mean-std], 'y-') plt.plot([0,len(temps)], [mean+2*std, mean+2*std], 'r-') plt.plot([0,len(temps)], [mean-2*std, mean-2*std], 'r-')	Plot the mean, positive and negative standard deviation and double standard deviation lines
plt.plot([0,len(temps)], [mean, mean], 'g-') plt.plot([0,len(temps)], [mean+std, mean+std], 'y-') plt.plot([0,len(temps)], [mean-std, mean-std], 'y-') plt.plot([0,len(temps)], [mean+2*std, mean+2*std], 'r-')	Plot the mean and standard deviation lines and the temperatures all on the same graph

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plt.plot([0,len(temps)], [mean-2*std, mean-
2*std], 'r-')
plt.plot(range(len(temps)), temps, 'b-')
plt.show()
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