…………………………………………………………………..Assignment……………………………………………………………………

 How to find the mean of every NumPy array in the given list?

Input:

list = [ np.array([3, 2, 8, 9]), np.array([4, 12, 34, 25, 78]), np.array([23, 12, 67]) ]

#code

import numpy as np

# Input list of NumPy arrays

array\_list = [np.array([3, 2, 8, 9]), np.array([4, 12, 34, 25, 78]), np.array([23, 12, 67])]

# Calculate the mean of each array

means = [np.mean(arr) for arr in array\_list]

print("Mean of each NumPy array:")

print(means)

output: Mean of each NumPy array:

[5.5, 30.6, 34.0]

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2. Compute the median of the flattened NumPy array

Input: x\_odd = np.array([1, 2, 3, 4, 5, 6, 7])

//code

import numpy as np

# Input array

x\_odd = np.array([1, 2, 3, 4, 5, 6, 7])

# Flatten the array

flattened\_array = x\_odd.flatten()

# Compute the median

median = np.median(flattened\_array)

print("Median of the flattened NumPy array:", median)

output: Median of the flattened NumPy array: 4.0

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3. Compute the standard deviation of the NumPy array

Input: arr = [20, 2, 7, 1, 34]

//code

import numpy as np

arr = np.array([20, 2, 7, 1, 34])

std\_dev = np.std(arr)

print("Standard Deviation:", std\_dev)

output: Standard Deviation: 12.576167937809991

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4. Suppose you have a CSV file named 'house\_prices.csv' with price information, and you want to perform the following operations:

● 1.Read the data from the CSV file into a NumPy array.

● 2.Calculate the average of house prices.

● 3.Identify house price above the average.

● 4.Save the list of high prices to a new CSV file. Note: Download 'house\_prices.csv' file from LMS.

//code

import numpy as np

# Step 1: Read the data from the CSV file into a NumPy array

data = np.genfromtxt('house\_prices.csv', delimiter=',')

# Step 2: Calculate the average of house prices

average\_price = np.mean(data)

# Step 3: Identify house prices above the average

high\_prices = data[data > average\_price]

# Step 4: Save the list of high prices to a new CSV file

np.savetxt('high\_prices.csv', high\_prices, delimiter=',')

print("Average house price:", average\_price)

output: Average house price: 250000.0

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