Softnerve Tech Assessment: Om Gholap

Q1)

Code:

def find\_leader(arr, n):

leaders = set()

for i in range(0, n):

for j in range(i, n):

if (arr[i] < arr[j]):

break

if (j == n - 1):

leaders.add(arr[i])

print("Leaders are : ")

print(sorted(list(leaders), *reverse*=True))

arr = [ 7, 10, 4, 10, 6, 5, 2]

n = len(arr)

find\_leader(arr, n)

Output:   
Leaders are :

[10, 6, 5, 2]

Q2)

Code :

def buy\_sell\_stock(prices):

if len(prices) < 2:

return 0

min\_price = prices[0]

max\_profit = 0

for i in range(1, len(prices)):

if prices[i] < min\_price:

min\_price = prices[i]

else:

max\_profit = max(max\_profit, prices[i] - min\_price)

return max\_profit

prices = [7,1,5,3,6,4]

result = buy\_sell\_stock(prices)

print("Maximum profit:", result)

Output:

Maximum profit: 5

Q3)

Code :

def XOR(nums):

def calculation(arr, xor\_total, index):

if index == len(arr):

return xor\_total

include = calculation(arr, xor\_total ^ arr[index], index + 1)

exclude = calculation(arr, xor\_total, index + 1)

return include + exclude

return calculation(nums, 0, 0)

nums = [5,1,6]

result = XOR(nums)

print("XOR totals:", result)

Output :

XOR totals: 28

DSA : Arrays and Bubble sort

Hackerrank: [Om Gholap - omsagargholap | HackerRank](https://www.hackerrank.com/omsagargholap?hr_r=1)

Deep Learning:

With experience spanning from Jun 2022 to the present, I have delved into various domains of machine learning and deep learning. From developing self-driving car systems with 94% accuracy in road sign detection to building regression models and performing data analysis, I have showcased my expertise in extracting data, NLP, object detection, and disease prediction. My proficiency in these areas has been instrumental in contributing to the field of artificial intelligence and data science and earning a high rating in deep learning and machine learning.

Research appetite:

As a research-driven student, I am eager to showcase my ability to articulate thoughts through documentation following the final fitment round with the HR and mentor. In a recent project focused on leaf disease classification, I conducted research and development by utilizing a deep learning model, data augmentation techniques, and the TensorFlow library. The model was deployed on a secure web-based application, exclusively running the disease detection process for leaf images.I am excited to engage in discussions, demonstrating my research appetite and effective communication skills.

Github link : <https://github.com/OmGholap>

Leaders are : [10, 6, 5, 2]

[10, 6, 5, 2]