MACHINE LEARNING ASSIGNMENT 2

GIT HUB LINK: https://github.com/NithinThota9/MachineLearning

1.Use a python code to display the following star pattern using the for loop

Code:

def half\_pyramid(n, current=1):

if current > n:

return

print('\*' \* current)

half\_pyramid(n, current + 1)

print('\*' \* current)

n = 5

half\_pyramid(n)

Output:

A screen shot of a computer screen

Description automatically generated

1. Use looping to output the elements from a provided list present at odd indexes. my\_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]

CODE:

my\_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]

for i in range(1, len(my\_list), 2):

print(my\_list[i])

Output:

A red dot on a black background

Description automatically generated

3.Write a code that appends the type of elements from a given list. Input x = [23, ‘Python’, 23.98] Expected output [23, 'Python', 23.98] [<class 'int'>, <class 'str'>, <class 'float'>]

Code:

x = [23, 'Python', 23.98]

types = [type(item) for item in x]

print(x)

print(types)

Output:

A screen shot of a computer

Description automatically generated

4.Write a function that takes a list and returns a new list with unique items of the first list. Sample List: [1,2,3,3,3,3,4,5] Unique List: [1, 2, 3, 4, 5]  
  
Code:

def unique\_items(input\_list):

    seen = set()

    unique\_list = []

    for item in input\_list:

        if item not in seen:

            seen.add(item)

            unique\_list.append(item)

    return unique\_list

sample\_list = [1, 2, 3, 3, 3, 3, 4, 5]

unique\_list = unique\_items(sample\_list)

print(f"Unique List: {unique\_list}")

Output:

A number on a grey background

Description automatically generated

1. Write a function that accepts a string and calculate the number of upper-case letters and lower-case letters. Input String: 'The quick Brow Fox' Expected Output: No. of Upper-case characters: 3 No. of Lower-case Characters: 12  
     
   Code:

def count\_upper\_lower(s):

upper\_count = sum(1 for c in s if c.isupper())

lower\_count = sum(1 for c in s if c.islower())

return upper\_count, lower\_count

input\_string = 'The quick Brow Fox'

upper\_case\_count, lower\_case\_count = count\_upper\_lower(input\_string)

print(f"No. of Upper-case characters: {upper\_case\_count}")

print(f"No. of Lower-case characters: {lower\_case\_count}")

Output:

A screenshot of a computer

Description automatically generated