

Python / Deep Learning Developer Coding Questions

A separate py file should be sent for each question (2 files in total, i.e. ann.py, int.py)

Codes will be evaluated via white box method both for correctness and readability/code quality.

1. We want to construct an artificial neural network which takes the following inputs and produces a single output:

	Input			Output
Training data 1	0	0	1	0
Training data 2	1	1	1	1
Training data 3	1	0	1	1
Training data 4	0	1	1	0
New Situation	1	0	0	?

Please also state the value ANN finds for the “New Situation”.

2. Write a function in python which counts the total number of alternative integer summations of 1,2 & 3 to achieve the given integer:

Input: $x = 3$

Output: 4 ($1+1+1 = 3$, $1+2 = 3$, $2+1 = 3$, $3 = 3$)

Input: $x = 4$

Output: 7 ($1+1+1+1 = 4$, $1+1+2=4$, $1+2+1=4$, $2+1+1=4$, $2+2=4$, $1+3=4$, $3+1=4$)

($4=4$ is not counted since we are using only summations of 1,2 & 3)