

ANN Multi Layer Perceptron

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1 Implementation of MultiLayer Perceptron in Artificial Neural Network

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[ ]: import numpy as np
import pandas as pd
```

```
[ ]: df=pd.read_csv('/content/drive/MyDrive/Colab Notebooks/ML-DSE4/ANN.csv')
print(df)
```

	Roll_No	Mathematics	Comp_Sci
0	1	8	9
1	2	8	9
2	3	8	9
3	4	8	8
4	5	9	8
5	6	5	8
6	7	6	7
7	8	9	7
8	9	7	6
9	10	4	6

```
[ ]: w1=np.array([[4,5],[6,7]])
w2=np.array([1,2])
```

```
[ ]: def ANN(x,w):
    wt_sum=np.dot(x,w)
    return wt_sum
```

```
[ ]: def Act_Func(cgpa):
    if cgpa>=35:
        return 1
    else:
        return 0
```

```
[ ]: x=list()
for i in range(10):
    grades=df.loc[i][1:]
```

```

print('Student ',i+1)
print('Weighted Sum:')
m1=ANN(grades,w1[0])
m2=ANN(grades,w1[1])
print('Intermediate Layer-1',m1)
print('Intermediate Layer-2',m2)
x.append(m1)
x.append(m2)
print('Final Output:')
if (Act_Func(ANN(x,w2))==1):
    print('Pass')
else:
    print('Fail')
x.clear()

```

```

Student  1
Weighted Sum:
Intermediate Layer-1 77
Intermediate Layer-2 111
Final Output:
Pass
Student  2
Weighted Sum:
Intermediate Layer-1 77
Intermediate Layer-2 111
Final Output:
Pass
Student  3
Weighted Sum:
Intermediate Layer-1 77
Intermediate Layer-2 111
Final Output:
Pass
Student  4
Weighted Sum:
Intermediate Layer-1 72
Intermediate Layer-2 104
Final Output:
Pass
Student  5
Weighted Sum:
Intermediate Layer-1 76
Intermediate Layer-2 110
Final Output:
Pass
Student  6
Weighted Sum:

```

Intermediate Layer-1 60
Intermediate Layer-2 86
Final Output:
Pass
Student 7
Weighted Sum:
Intermediate Layer-1 59
Intermediate Layer-2 85
Final Output:
Pass
Student 8
Weighted Sum:
Intermediate Layer-1 71
Intermediate Layer-2 103
Final Output:
Pass
Student 9
Weighted Sum:
Intermediate Layer-1 58
Intermediate Layer-2 84
Final Output:
Pass
Student 10
Weighted Sum:
Intermediate Layer-1 46
Intermediate Layer-2 66
Final Output:
Pass