

딥러닝 실제

3주차 과제 전가산기 (*Full Adder*) 구현

학과 : 산업인공지능학과

학번 : 2024254022

이름 : 정현일

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Full Adder python 코드 수행 결과

```
/Users/chohi/project/ai/DeepLearning/fulladder.py

37     else:
38         return 1
39
40     def AND (x1, x2):
41         x = np.array([x1,x2])
42         w = np.array([0.5, 0.5])
43         b = -0.7
44
45         tmp = np.sum(w*x) + b
46         if tmp <= 0:
47             return 0
48         else:
49             return 1
50
51     def XOR(x1, x2):
52         s1 = NAND(x1, x2)
53         s2 = OR(x1, x2)
54         y = AND(s1, s2)
55         return y
56
57     def FullAdder(x1, x2, x3):
58         s1 = XOR(x1, x2)
59         s2 = XOR(s1, x3)
60         t1 = AND(s1, x3)
61         t2 = AND(x1, x2)
62         c1 = OR(t1, t2)
63
64         return s2, c1
65
66
67
68     print('FullAdder')
69     print(FullAdder(0,0,0))
70     print(FullAdder(0,0,1))
71
72     print(FullAdder(1,0,0))
73     print(FullAdder(1,0,1))
74
75     print(FullAdder(0,1,0))
76     print(FullAdder(0,1,1))
77
78     print(FullAdder(1,1,0))
79     print(FullAdder(1,1,1))
80
81
82
```

Usage

Here you can get help of any object by pressing **Cmd+I** in front of it, either on the Editor or the Console.

Help can also be shown

Help Variable Explorer Plots Files

Console 1/A

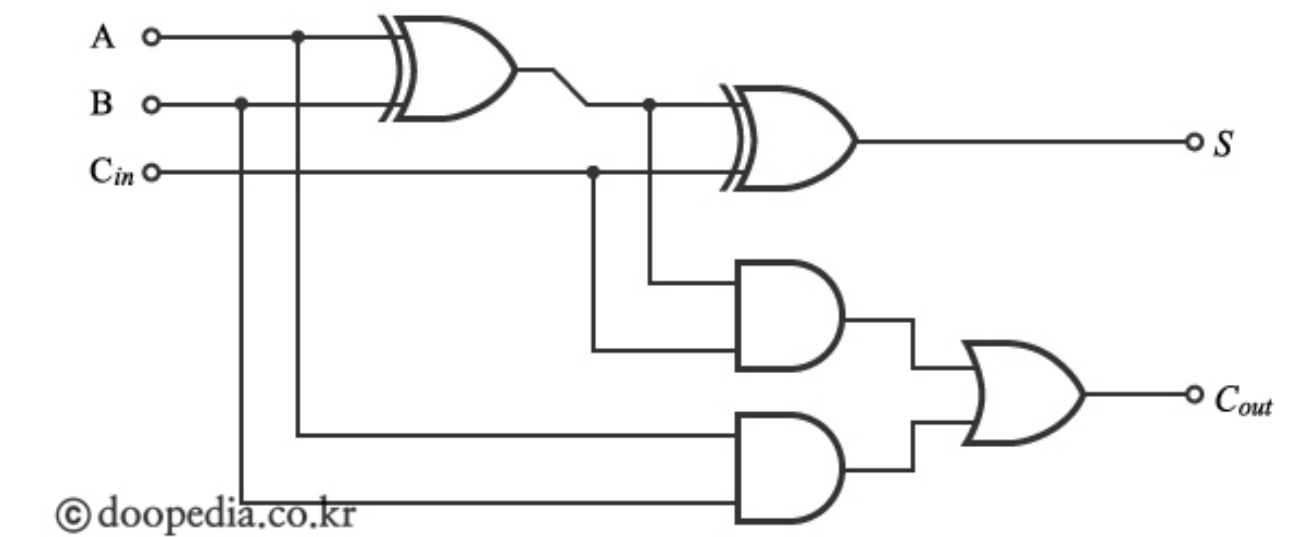
```
In [11]: runfile('/Users/chohi/project/ai/DeepLearning/fulladder.py', wdir='/Users/chohi/project/ai/DeepLearning')
FullAdder
(0, 0)
(1, 0)
(1, 0)
(0, 1)
(1, 0)
(0, 1)
(0, 1)
(0, 1)
(1, 1)

In [12]:
```

IPython Console History

conda: base (Python 3.11.7) Completions: conda(base) LSP: Python Line 67, Col 1 UTF-8 LF RW Mem 69%

전가산기 논리 회로



Full Adder 논리 회로 참조