## NO MORE LATE DAYS LEFT

# **CIS419 Machine Learning**

Assignment IV

Part I

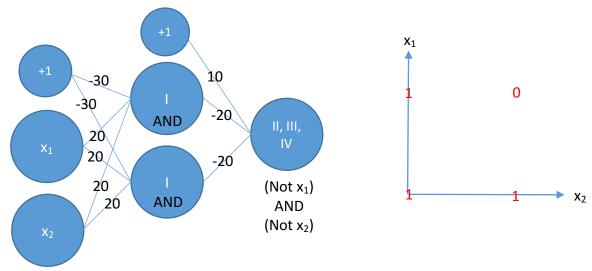
James Wang Nov. 09, 2015

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### Part I: Problem Set

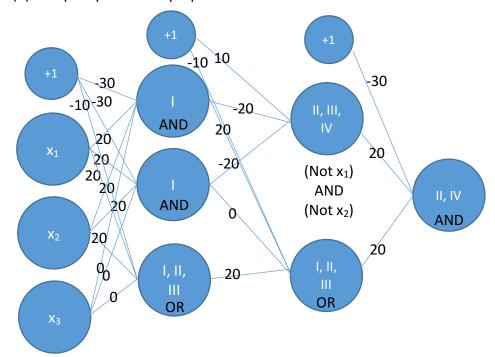
### 1 Logical Functions with Neural Networks

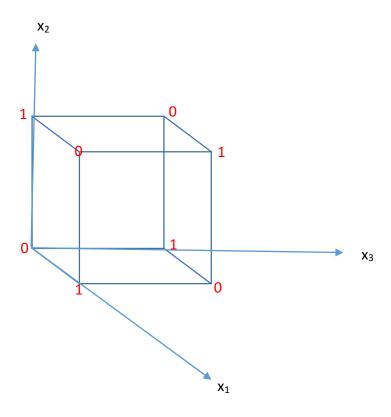
#### (a) NAND of 2 binary inputs



X <sub>1</sub>	X <sub>2</sub>	$h\Theta(x)$
0	0	1
0	1	1
1	0	1
1	1	0

#### (b) The parity of 3 binary inputs





X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	$h\Theta(x)$
0	0	0	0
1	0	0	1
0	1	0	1
0	0	1	1
1	1	0	0
1	0	1	0
0	1	1	0
1	1	1	1