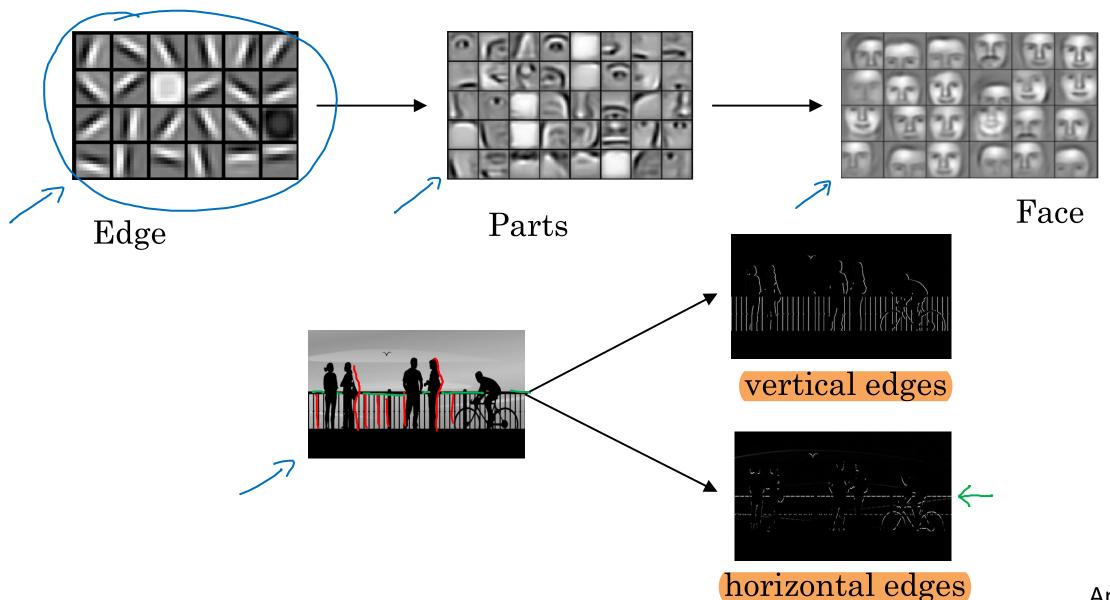


# Convolutional Neural Networks

# Edge detection example

## Computer Vision Problem



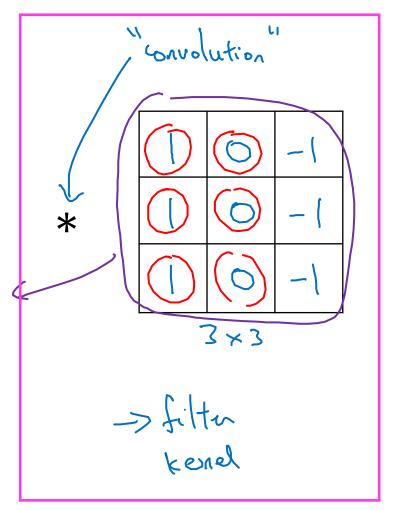
Andrew Ng

### Vertical edge detection

103x1 + 1x1 +2+1 + 0x0 + 5x0 +7x0+1x+ +8x-1+2x-1=-5

3	0	1	2 10	7	4
1	5	8		3	1
2	1	2	5	1-0	3
01	1	3	1	7-0	8 <sup>-1</sup>
4	2	1	6	2	8
		5		3	Q

1	<u> </u>	4
4	X	0



-5	-4	0	8	
-10	-2	2	3	
0	-2	-4	-7	
-3	-2	-3(	-16	
4x4				

### Vertical edge detection

4	1					
	10	10	10	0	O	0
	10	10	10	0	0	0
	10	10	10	0	0/	0
	10	10	10	0	0	0
	10	10	10	0	0	0
	10	10	10	0	0	0

	_	U	
	1	0	<u>-1</u>
k	1	0	-1
	1	0	-1
		7×3	

<u> </u>	-			
0	30	30	0	
0	30	30	0	
0	30	30	0	
0	30	30	0	
14x4				

