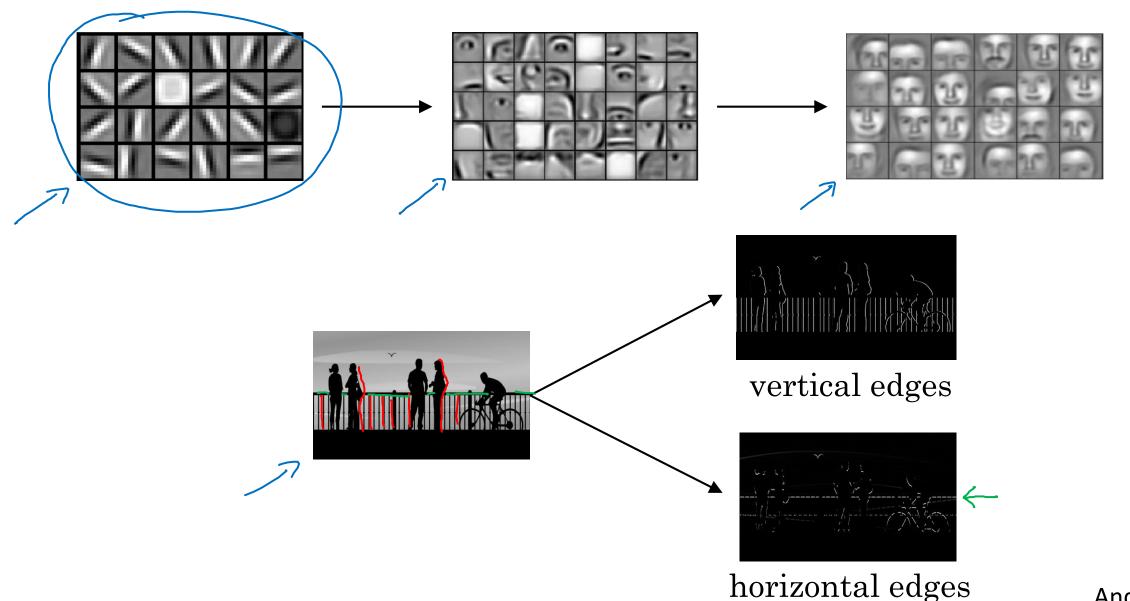


Convolutional Neural Networks

Edge detection example

Computer Vision Problem



Andrew Ng

Vertical edge detection

1-5 3×1 + 1×1 +2+1 + 0×0 +5×0 +7×0+1×7 +8×-1+2×-1=-5

3	0	1	2 -10	7 ⁻⁰	4	Convolution				
1	5	8		3-0	1-1		-5	-4	0	8
2		2	5	1	3	* 0 0 -1 =	-10	-2	2	3
0	1	3	1	7	8-1		0	-2	-4	-7
4	2	1	6	2	8	3×3	-3	-2	-3(-16
2	4	5	2	3	9	-> filter		4x	4	,
		6×6				-> filter kenel				

Vertical edge detection

<u> </u>					
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
6 x (

	_	J	
	1	0	<u>-1</u>
*	1	0	-1
	1	0	-1
		3×3	

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

