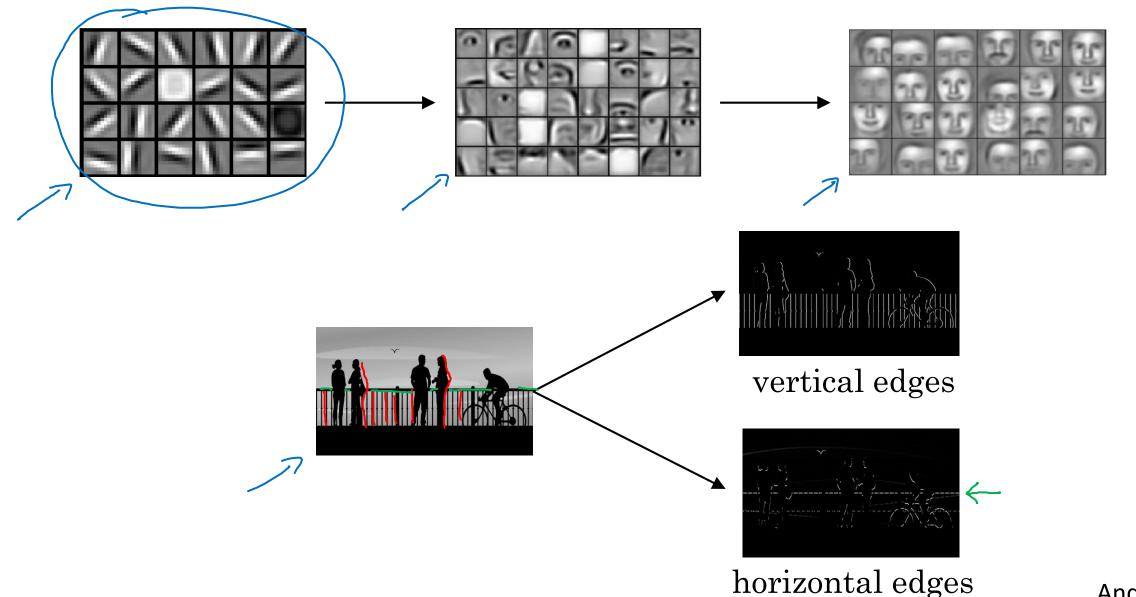


Convolutional Neural Networks

Edge detection example

Computer Vision Problem



Vertical edge detection

103x1 + 1x1 +2+1 + 0x0 + 5x0 +7x0+1x7 +8x-1+2x-1=-5

3	0	1	2 -10	7	4	Convolution				
1	5	8		3	1		-5	-4	0	8
2		2	5	1	3	*	-10	-2	2	3
01	1	3	1	7 ⁻⁰	8 ⁻¹		0	-2	-4	-7
4	2	1	6	2	8	3×3	-3	-2	-3(-16
2	4	5	2	3	9	-> filto		4x	4	
6×6					kenel					

Vertical edge detection

1					
10	10	10	0	O	0
10	10	10	0	0	0
10	10	10	0	0	0
10	10	10	O	0	0
10	10	10	0	0	0
10	10	10	0	0	0
6 x (

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

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

