ASSIGNMENT

ASSIGNMENT NO -02

Course NO   :   CSE-477

Course Name   :   Neural Network & Fuzzy Systems

Submission Date :   02/12/2023

Submitted To
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Given,

Stride = 1 ; Padding = 1 ; Max Polling = (2,2)

∴ Input:

0	0	0	0	0	0	0
0	0	1	1	0	1	0
0	0	1	1	0	1	0
0	0	1	1	0	1	0
0	0	1	1	0	1	0
0	0	1	1	0	1	0
0	0	0	0	0	0	0

Added Padding added

filter 1

1	0	1
1	1	1
0	0	1

filter 2

0	0	1
1	0	0
0	1	1

$$= \begin{bmatrix} 2 & 3 & 2 & 3 & 1 \\ 3 & 4 & 3 & 5 & 1 \\ 3 & 4 & 3 & 5 & 1 \\ 3 & 4 & 3 & 5 & 1 \\ 2 & 3 & 3 & 4 & 1 \end{bmatrix} + \begin{bmatrix} 1 & 2 & 2 & 2 & 1 \\ 2 & 3 & 2 & 3 & 1 \\ 2 & 3 & 2 & 3 & 1 \\ 2 & 3 & 2 & 3 & 1 \\ 1 & 1 & 1 & 2 & 0 \end{bmatrix}$$

$(n-f+1) \times (n-f+1)$
$= (7-3+1) \times (7-3+1)$
$= 5 \times 5$

Applying filter 1

$$= \begin{bmatrix} 3 & 5 & 4 & 5 & 2 \\ 5 & 7 & 5 & 8 & 2 \\ 5 & 7 & 5 & 8 & 2 \\ 5 & 7 & 5 & 8 & 2 \\ 3 & 4 & 4 & 6 & 1 \end{bmatrix}$$

Applying filter 2

$$\xrightarrow{\text{max pooing}} \begin{bmatrix} 7 & 7 & 8 & 8 \\ 7 & 7 & 8 & 8 \\ 7 & 7 & 8 & 8 \\ 7 & 7 & 8 & 8 \end{bmatrix}$$

$(5-2+1) \times (5-2+1)$
$= 4 \times 4$