



BUBT

BANGLADESH UNIVERSITY OF
BUSINESS AND TECHNOLOGY

ASSIGNMENT

Assignment no - 02

Course No : CSE 477

Course Name : Neural Network and Fuzzy System

Submission Date : 02/12/23

Submitted To

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Department of Computer Science & Engineering

Submitted By

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ID:19202103313 INATKE:44 SECTION:03

Input	Filter 1	Filter 2																																											
<table><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td></tr></table>	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	<table><tr><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>1</td></tr><tr><td>0</td><td>0</td><td>1</td></tr></table>	1	0	1	1	1	1	0	0	1	<table><tr><td>0</td><td>0</td><td>1</td></tr><tr><td>1</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td></tr></table>	0	0	1	1	0	0	0	1	1
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- Showing the convolutional operation for following input & filters;

Here, given stride = 1, padding = 1, Max pooling = (2, 2)

- Now, add padding

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

After add padding

1	0	1
1	1	1
0	0	1

Filter 1

0	0	1
1	0	0
0	1	1

Filter 2

• Filter 1:

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

After filter-01

• Filter 2:

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

After filter-02

- Adding "After filter-01" & "After filter-02"

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

Max pooling = (2, 2) →

7	7	8	8
7	7	8	8
7	7	8	8
7	7	8	8

(Ans:)