For a 3 X 3 Gaussian Filter:

|  |  |  |
| --- | --- | --- |
| -1 | 0 | 1 |
| -1 | 0 | 1 |
| -1 | 0 | 1 |

X =

|  |  |  |
| --- | --- | --- |
| -1 | -1 | -1 |
| 0 | 0 | 0 |
| 1 | 1 | 1 |

Y =

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| -2 | -1 | 0 | 1 | 2 |
| -2 | -1 | 0 | 1 | 2 |
| -2 | -1 | 0 | 1 | 2 |
| -2 | -1 | 0 | 1 | 2 |
| -2 | -1 | 0 | 1 | 2 |

For a 5 X 5 Gaussian Filter:  
  
X =

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| -2 | -2 | -2 | -2 | -2 |
| -1 | -1 | -1 | -1 | -1 |
| 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 |

Y =

Have you noticed the pattern?? Can you now generate X and Y matrix for any odd value? ( Try for 7, 9, 11 …..)