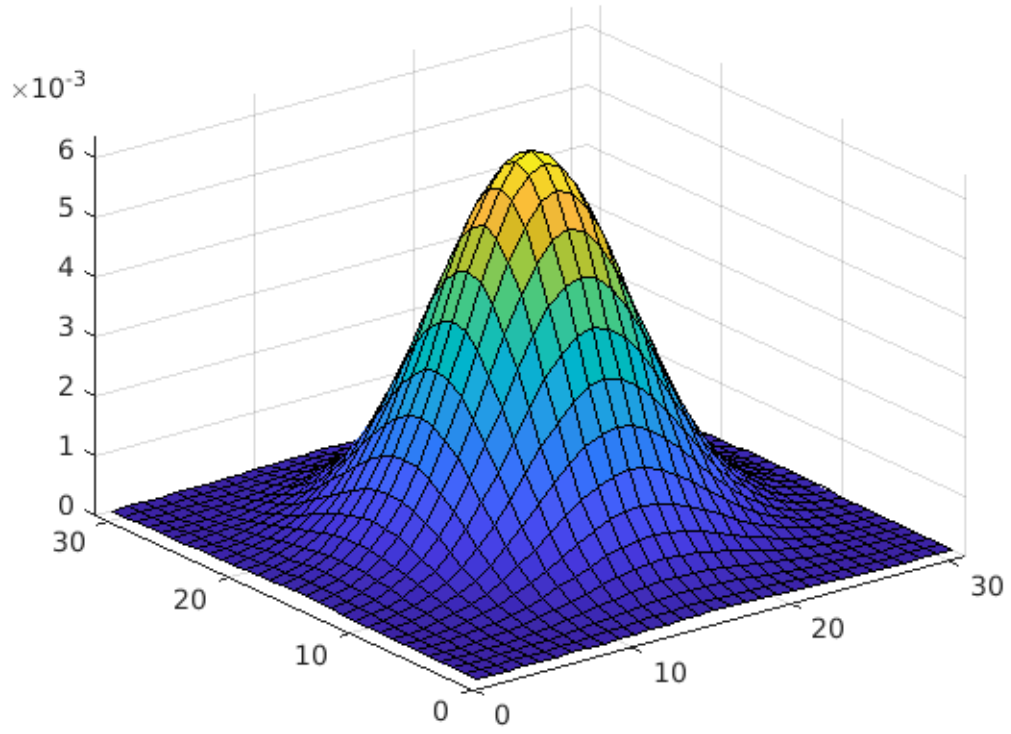
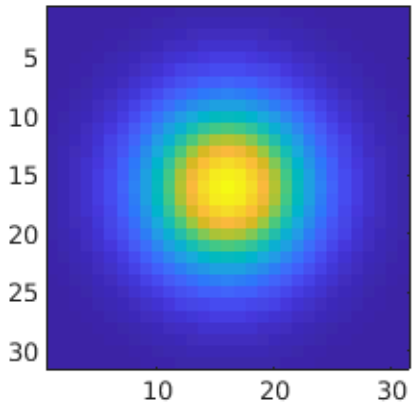
```
% Inspect image values
img = imread('jodhpur.jpg');
disp(size(img));

% Smoothing by Gaussian Filtering Sigma = 5
filter_size = 31;
sigma = 5;
kernel = fspecial('gaussian', filter_size, sigma);
surf(kernel);
figure(1)
subplot(1,2,1)
imagesc(kernel)
axis image
sgtitle('Gaussian Filter Kernel (Sigma = 5, Size = 31)')

figure(2)
outim = imfilter(img, kernel);
subplot(1,2,1)
imshow(img)
title('City of Jodhpur')
subplot(1,2,2)
imshow(outim)
title('Blurred with Gaussian Filter')

% Add Gaussian noise then remove with Gaussian Filter
noise = uint8(rand(size(img))).*30;
noisy_jodhpur = img + noise;
figure(3)
subplot(1,3,1)
imshow(noisy_jodhpur)
title('Gaussian Noise')
kernel2 = fspecial('gaussian', 9, 2);
smoothed = imfilter(noisy_jodhpur, kernel2);
subplot(1,3,2)
imshow(smoothed)
title('Smoothed')
subplot(1,3,3)
imshow(img)
title('Original Image')
```

```
        1024         683           3
```



Gaussian Filter Kernel (Sigma = 5, Size = 31)



City of Jodhpur

Blurred with Gaussian Filter

Gaussian Noise

Smoothed

Original Image

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