```
img = imread('butterful.png');
grayImg = rgb2gray(img);
roi = grayImg > 100;
gaussianFiltered = imgaussfilt(grayImg, 2);
averageFiltered = filter2(fspecial('average', [5 5]), grayImg);

averageFiltered = mat2gray(averageFiltered);

laplacianFiltered = imfilter(grayImg, fspecial('laplacian'));
prewittFiltered = edge(grayImg, 'prewitt');
figure;
subplot(2,3,1), imshow(roi), title('Binary Mask');
subplot(2,3,2), imshow(gaussianFiltered), title('Gaussian Filter');
subplot(2,3,3), imshow(averageFiltered), title('Average Filter');
subplot(2,3,4), imshow(laplacianFiltered, []), title('Laplacian Filter');
subplot(2,3,5), imshow(prewittFiltered), title('Prewitt Filter');
```

Binary Mask **Gaussian Filter** **Average Filter**

Laplacian Filter **Prewitt Filter**