```matlab
img = imread('/MATLAB Drive/1.jpeg');

% Create a binary mask for the region of interest (using the red channel)

redChannel = img(:,:,1);
binaryMask = redChannel > 100;

% Apply low-pass filters
% Gaussian Filter
gaussianFiltered = imgaussfilt(img, 2);

% Average Filter (using imfilter for multi-channel)
averageFilter = fspecial('average', [5 5]);
averageFiltered = imfilter(img, averageFilter, 'same');

% Apply high-pass filters
% Laplacian Filter (using imfilter for multi-channel)
laplacianFiltered = imfilter(img, fspecial('laplacian'), 'same');

% Prewitt Filter (applied to the grayscale version)
grayImg = rgb2gray(img); % Convert to grayscale for edge detection
prewittFiltered = edge(grayImg, 'prewitt'); % Prewitt filter

figure;
subplot(231), imshow(binaryMask), title('Binary Mask');
subplot(232), imshow(gaussianFiltered), title('Gaussian Filter');
subplot(233), imshow(averageFiltered), title('Average Filter');
subplot(234), imshow(laplacianFiltered), title('Laplacian Filter');
subplot(235), imshow(prewittFiltered), title('Prewitt Filter');
```

Binary Mask

Gaussian Filter

Average Filter

Laplacian Filter

Prewitt Filter