Part 2: Laplacian Pyramid

```
images = ["../images/CARTOON.jpg", "../images/flowergray.jpg", "../
images/kitty.jpg", ...
    "../images/polarcities.jpg", "../images/text.jpg" ];

filter = [0.25,0.25; 0.25,0.25];

for image = images

    img = imread(image);
    [height, width] = size(img);
    side = log2(height);

    figure;

    for i= 1:side
        filteredImg = imfilter(img, filter, 'replicate', 'same');
        [height, width] = size(filteredImg);

        % Half size
        filteredImg = filteredImg(1:2:height, 1:2:width);

        % Produce same size of original image
        biImage = imresize(filteredImg, 2, 'bilinear');

        % Laplacian pyramid
        pyramid = biImage - img;

        img = filteredImg;
        subplot(4, 2, i);
        imshow(pyramid);
        title(sprintf('Laplacian Pyramid %d', i));
    end
end
```

Laplacian Pyramid 1

Laplacian Pyramid 2

Laplacian Pyramid 3

Laplacian Pyramid 4

Laplacian Pyramid 5

Laplacian Pyramid 6

Laplacian Pyramid 7

Laplacian Pyramid 8

Laplacian Pyramid 1

Laplacian Pyramid 2

Laplacian Pyramid 3

Laplacian Pyramid 4

Laplacian Pyramid 5

Laplacian Pyramid 6

Laplacian Pyramid 7

Laplacian Pyramid 8

Laplacian Pyramid 1

Laplacian Pyramid 2

Laplacian Pyramid 3

Laplacian Pyramid 4

Laplacian Pyramid 5

Laplacian Pyramid 6

Laplacian Pyramid 7

Laplacian Pyramid 8

Laplacian Pyramid 1

Laplacian Pyramid 2

Laplacian Pyramid 3

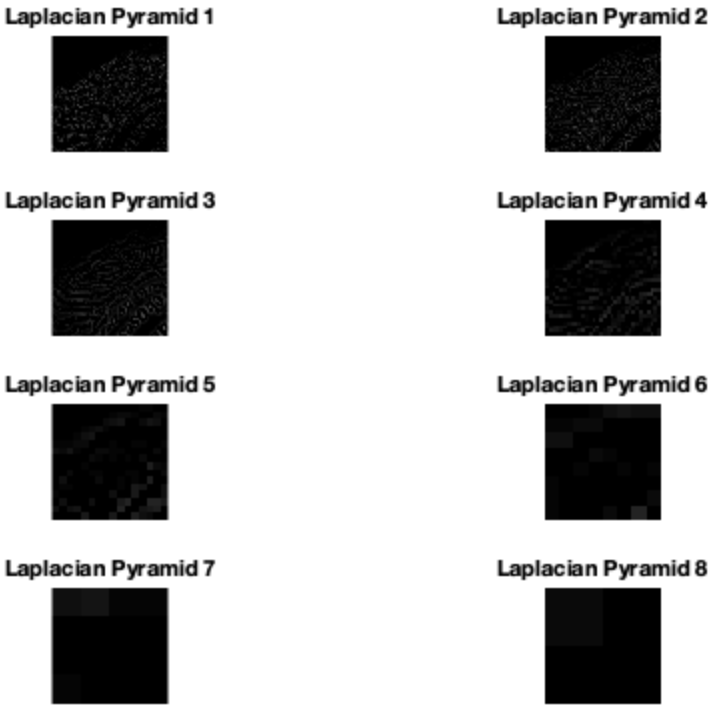
Laplacian Pyramid 4

Laplacian Pyramid 5

Laplacian Pyramid 6

Laplacian Pyramid 7

Laplacian Pyramid 8



Published with MATLAB® R2019b