

David Murray

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Computer Vision

Dr. Cheng

Homework 2: Hybrid Images

```
addpath('C:\Users\Dave\Desktop\Computer Vision\');

%%image0 = input(prompt1);
image1 = imread('cat.jpg');
%%image02 = input(prompt2);
image2 = imread('dog.jpg');
%cutoff_frequency = 0; %% 0.2hz$$$$$$$$$$$$$$$
h_size = size('cat.jpg');
large_1d_blur_filter = fspecial('Gaussian', [3 3], 0.5);

% Remove the high frequencies from image1 by blurring it.
low_frequencies = imfilter(image1,
large_1d_blur_filter, 'replicate', 'same');
low_frequencies = imfilter(low_frequencies,
large_1d_blur_filter, 'replicate', 'same');
figure(1)
imshow(low_frequencies);

% Remove the low frequencies from image2.
low_frequencies2 = imfilter(image2, large_1d_blur_filter);
low_frequencies2 = imfilter(low_frequencies2, large_1d_blur_filter);
figure(2)
imshow(low_frequencies2);

high_frequencies = imsubtract(image1, low_frequencies2);
% Combine the high frequencies and low frequencies
hybrid_image_2 = low_frequencies2+high_frequencies;
figure(3)
image(hybrid_image_2);
```



