

```
% Load the image
img = imread('image.jpg');
gray_img = rgb2gray(img);
gray_img = im2double(gray_img);

% Step 1: Quantize to 32 grayscale levels using imresize
% Resize the image to reduce color depth
levels = 32; % Number of grayscale levels
quantized_img = round(gray_img * (levels - 1));
quantized_img = quantized_img / (levels - 1);

% Step 2: Display the original and quantized images for comparison
figure;
imshow(gray_img);
title('Original Grayscale Image');
```

Original Grayscale Image



```
imshow(quantized_img);
title('Quantized Image (32 Grayscale Levels)');
```

Quantized Image (32 Grayscale Levels)

