%experimentation with upsampling an image

%IMAGE UPSAMPLING

%Upsampling is the process of inserting zeros in between the signal value in order to increase the size of the matrix.

A = imread('C:\Users\tvasu\Downloads\cameraman.tif');

figure,imagesc(A);colormap("gray");

M = 2;

N = 3;

B = zeros([size(A,1)\*M size(A,2)\*N]);

B(1:M:end,1:N:end) = A;

figure,imagesc(B);colormap(gray);

sz = M\*N;

H = fspecial('average',[sz sz]);

C = conv2(B,H,'same');

figure,imagesc(C);colormap(gray);