Computer Vision

# Assignment 1 Avdhesh Kumar U19ME191

## MATALB code:

img = imread("C:\Users\avdhe\Downloads\img\_51.jpg"); % Input the image file

theta = 51; % angle by which image is to be rotated

rmat = [ cos(theta) sin(theta) 0

- sin(theta) cos(theta) 0

0 0 1]; % defining rotation matrix

mx = size(img,2); % number of rows

my = size(img,1); % number of columns

corners = [ 0 0 1

mx 0 1

0 my 1

mx my 1]; % defining corner matrix

new\_c = corners\*rmat; % rotating the image

T = maketform('affine', rmat); % translation line

img2 = imtransform(img, T, ...

'XData',[min(new\_c(:,1)) max(new\_c(:,1))],...

'YData',[min(new\_c(:,2)) max(new\_c(:,2))]); % final rotated image

figure;

imshow(img);

title('Original Image U19ME191');

figure;

imshow(img2);

title('Rotated image by 51 degrees U19ME191');

