

Lab Sheet 1

Geometric Transformations

Aim:

To perform geometric transformations manually without using built-in OpenCV functions.

Tasks

1. Read the given image.
2. Define separate functions to implement the following transformations
 - Translation
 - Scaling
 - Shearing
 - Rotation
 - Euclidean
 - Similarity
 - Affine
 - Projective
3. Convert the pixel coordinate to homogeneous form.
4. Apply transformations.
5. Find the new coordinates.
6. Display the transformed image.
7. Experiment with various parameters on each transition.