Computer Vision, 3D Geometry and Machine Learning Notes

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Contents

1 Homogeneous Coordinates

$\tilde{\mathbf{x}} = [u, v, 1]$

2 Types of Transforms

Table 1 shows the types of transforms on 2D homogeneous coordinates. Each transform preserves all the quantities in its row and above it.

Transform	DoF	Preserves
Rotation	1	
Translation	2	
Similarity	4	angles
Affine	6	parallel lines
Projective	8	ratios of distances

Table 1: Types of transforms on 2D homogeneous coordinates