Computer Vision

• Recognition
• Motion estimation
• 3D reconstruction from 2D images

Can be seen as attempts at mimicking human vision
Computer Graphics
Computer Vision
We need a mathematical model of a camera
Euclidean transformation
Preserves distances and relative angles
Affine transformation
Preserves Parallelism
Projective transformation
Does not preserve parallelism
Epipolar geometry
Building a three-dimensional model. Start with two images.
Building a three-dimensional model. Find keypoints, using e.g. SIFT
Building a three-dimensional model. Match keypoints using e.g. RANSAC.