

lect 1 Introduction

Information from Image

1. Geometric Information
2. Semantic Information (语义)
The name/class/location of something

Human Vision

1. Good, fast and accurate
2. Can make mistakes.
3. Can study behavior
4. Can build and test model.

Computer Vision is hard:

1. Appearance is the only resource.
2. Huge amount of prior knowledge is needed
3. AI-complete (Difficult)
4. Lack of success path. Don't know which is correct
5. Nature World is complicated

Challenges

1. Viewpoint Variance
which direction the figure in the image is looking at?
2. Illumination
3. Scale
4. Deformation
5. Intra-class Variation
6. Clutter Occlusion
7. Motion
8. Ambiguity 3D \rightarrow 2D will lose some information.