

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
PROJECT MAC

Artificial Intelligence Group
Vision Memo. No. 100.

July 7, 1966

THE SUMMER VISION PROJECT

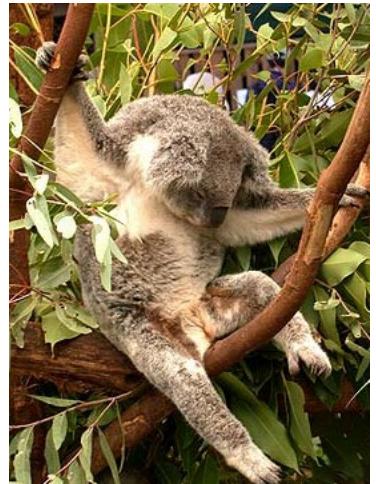
Seymour Papert

The summer vision project is an attempt to use our summer workers effectively in the construction of a significant part of a visual system. The particular task was chosen partly because it can be segmented into sub-problems which will allow individuals to work independently and yet participate in the construction of a system complex enough to be a real landmark in the development of "pattern recognition".

Challenges: robustness



Illumination



Object pose



Clutter



Occlusions



Intra-class appearance



Viewpoint

Challenges: broader context



Challenges: broader context



Scenes and object relationships



Function

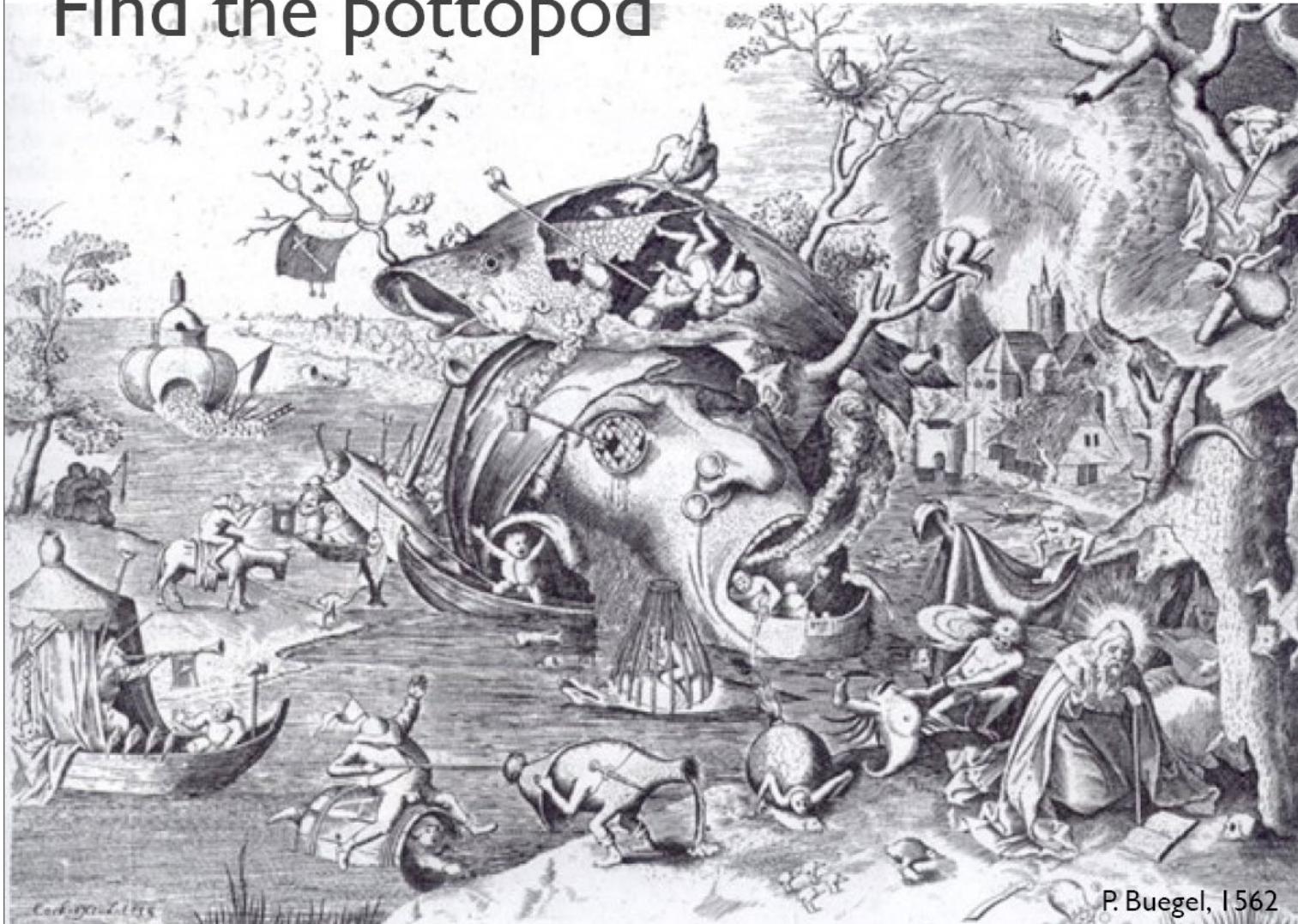
Challenges: “low-shot” learning



This is a
pottopod

Challenges: “low-shot” learning

Find the pottopod



P. Bruegel, 1562

Challenges: 2D observations of 3D world

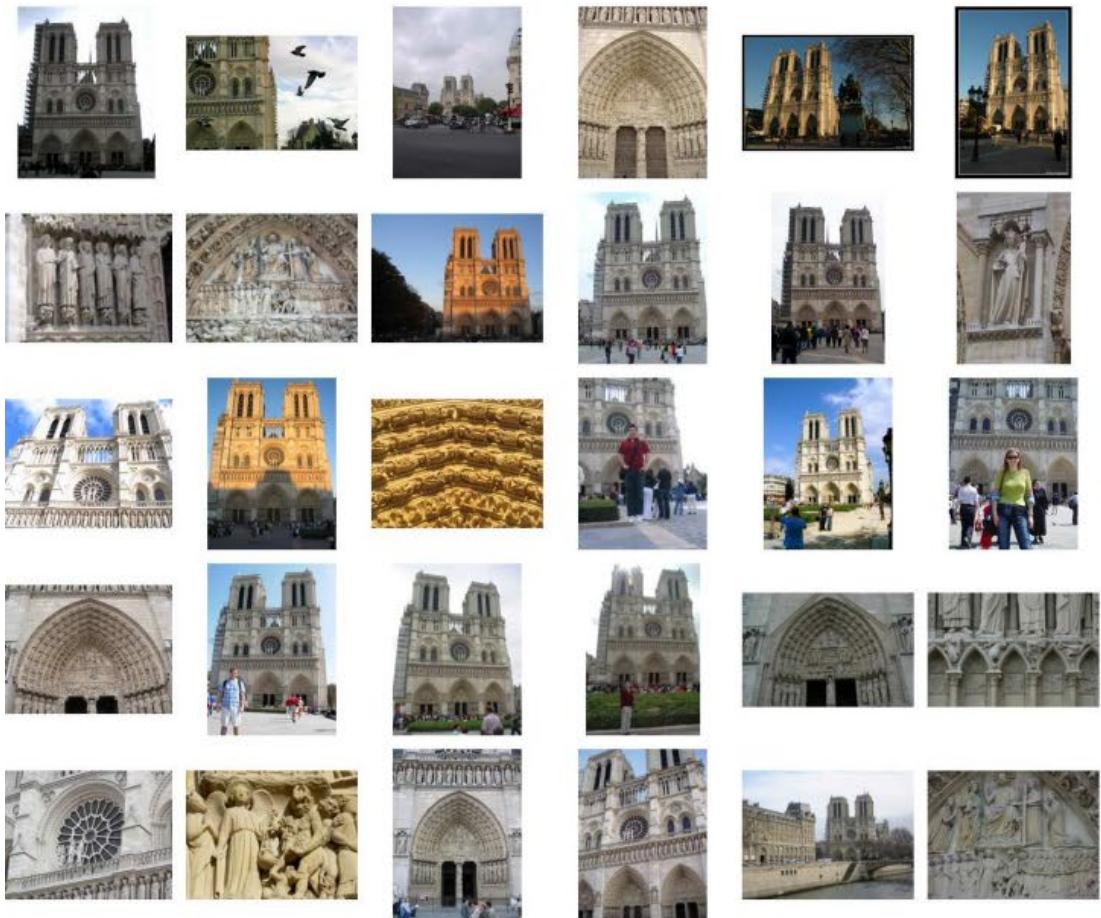


Figure from Snavely et al., PhotoTourism

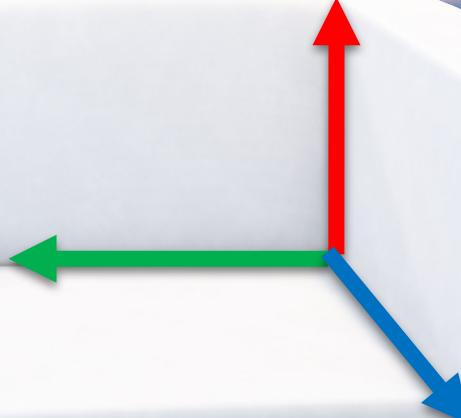
Sofa

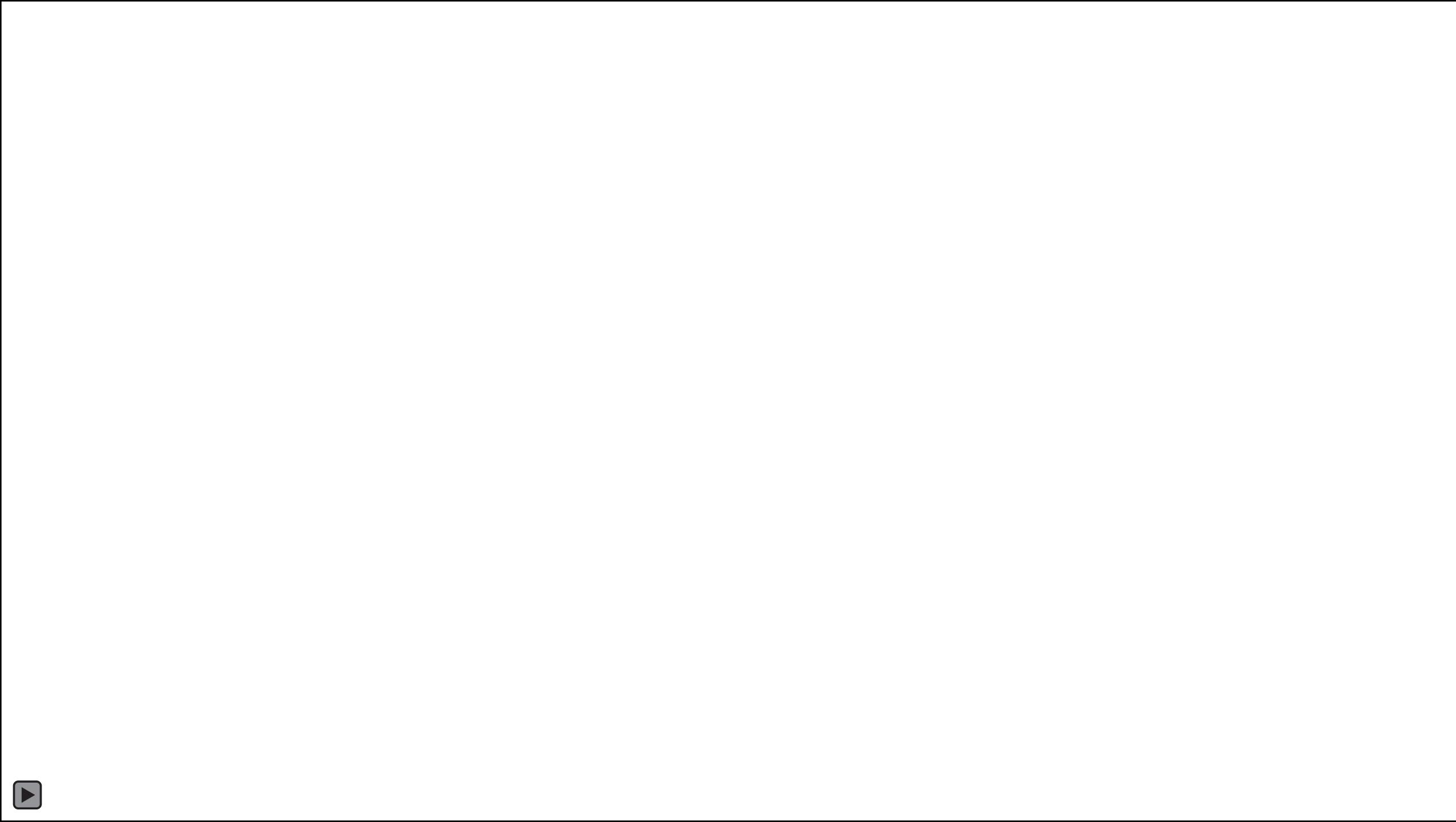
Living room

Today's models can learn many
scene/object understanding tasks well!

Dog

Baby





What challenges do we face in video?

Dynamics

Human activity

Cause and effect

Multimodal sensing, esp.
Audio, speech, language

Scaling
Streaming data
Network constraints