

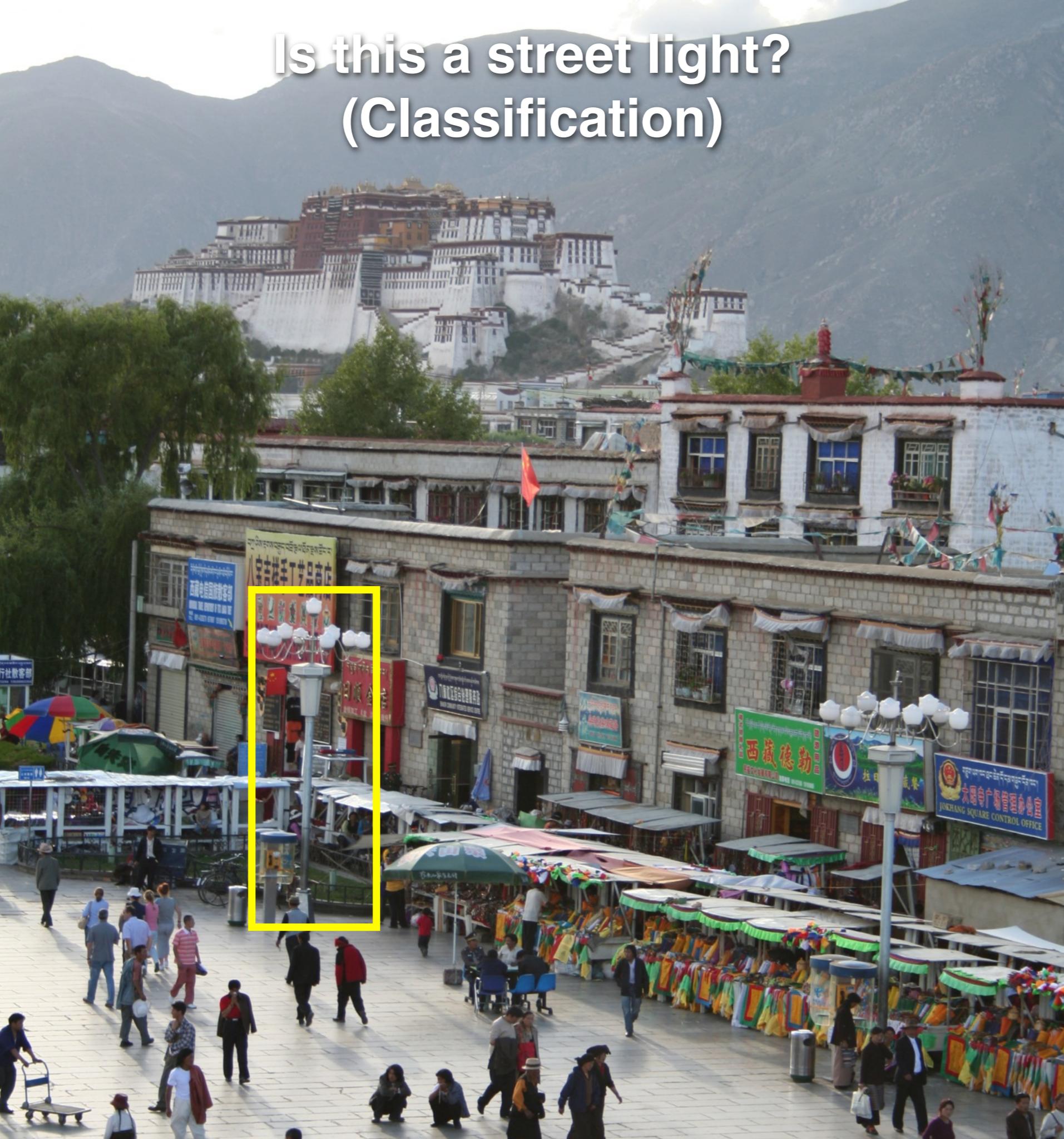
Henderson and Davis.  
Shape recognition using hierarchical  
Constraint Analysis. 1979

# Image Classification

Computer Vision

**Carnegie Mellon University (Kris Kitani)**

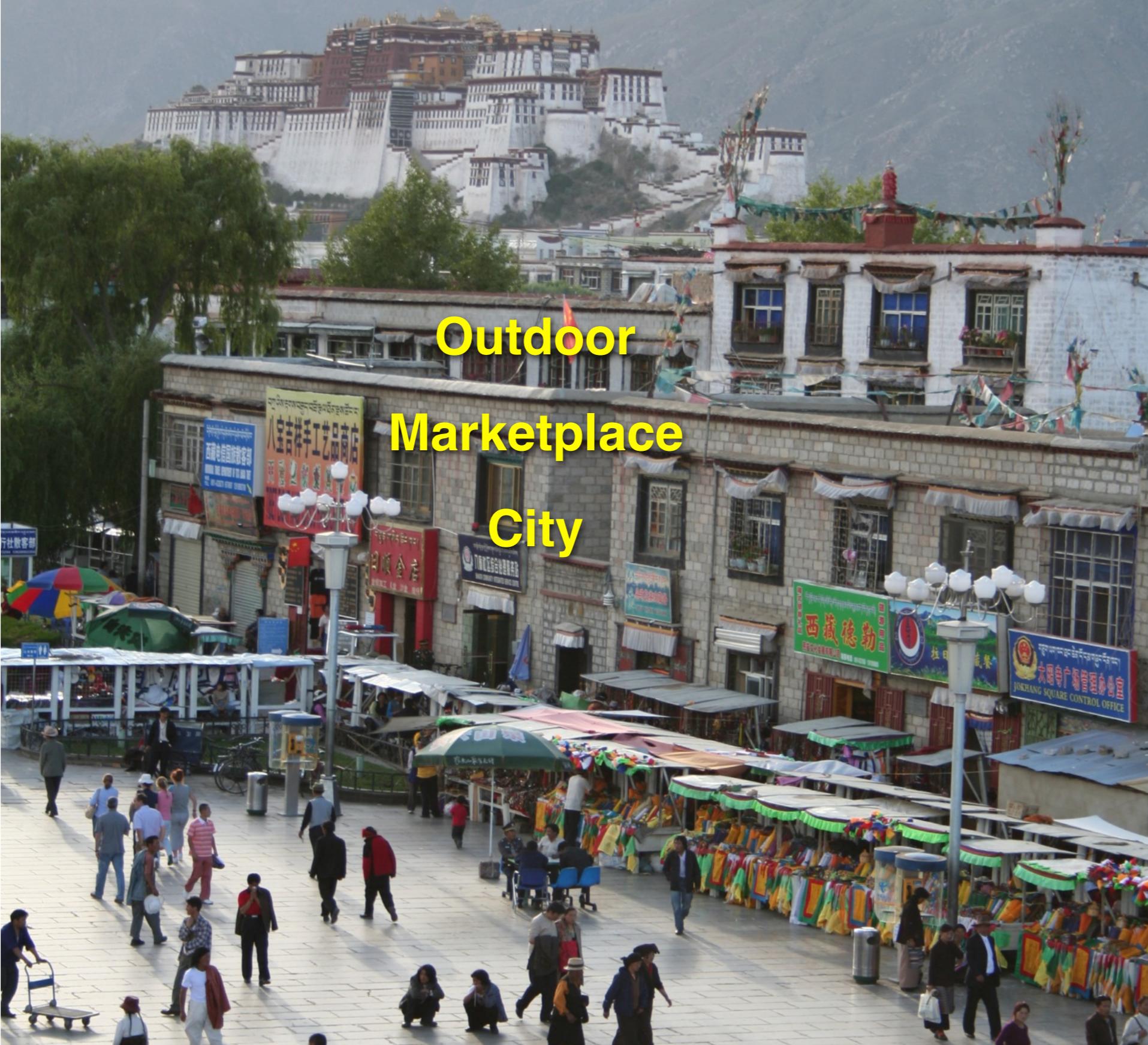
# Is this a street light? (Classification)



# Is that Potala palace? (Classification)

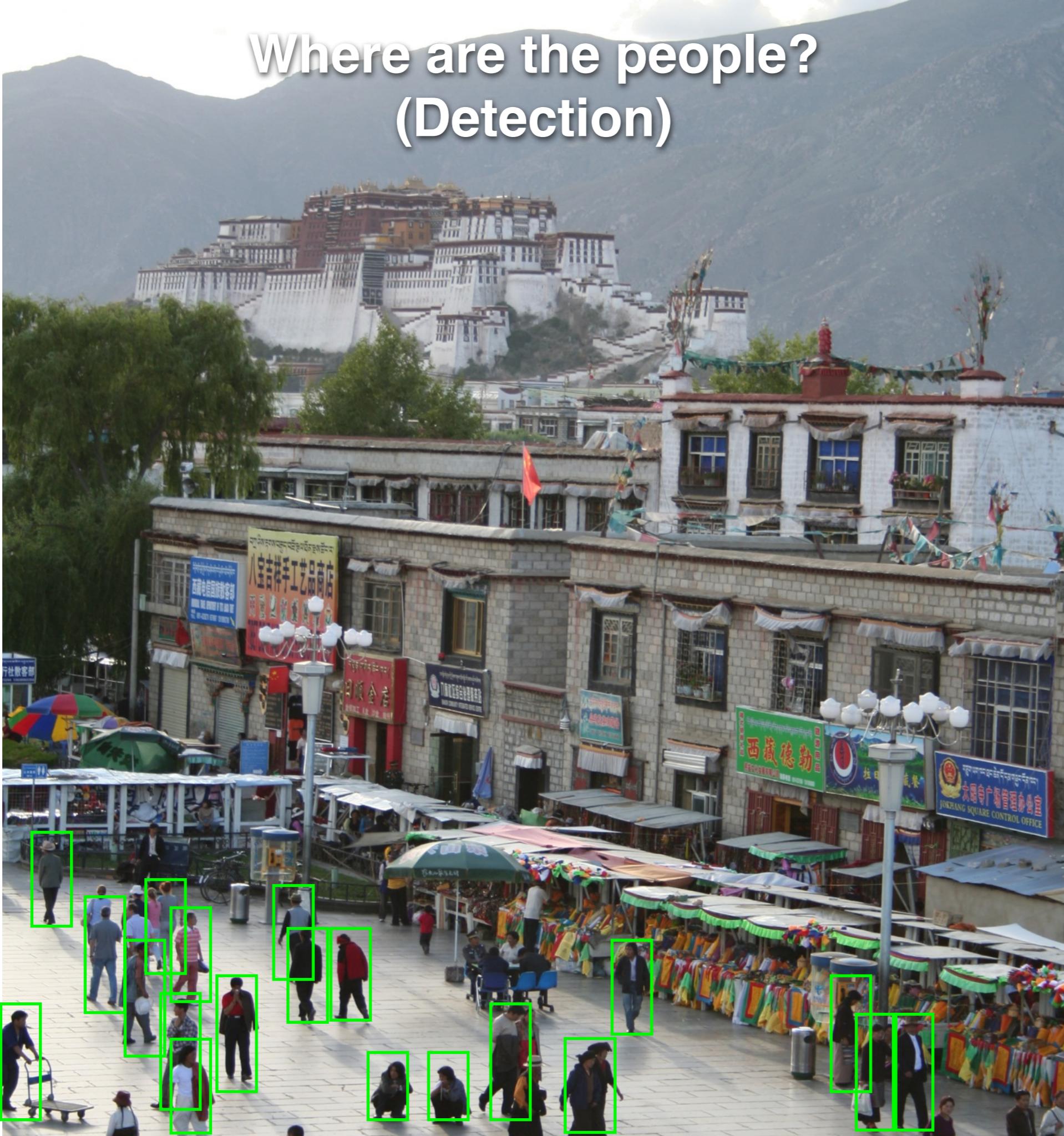


# What type of scene is it? (Classification)



Other visual tasks...

# Where are the people? (Detection)



Sky

# What's in the scene? (Segmentation)

Trees

Mountain

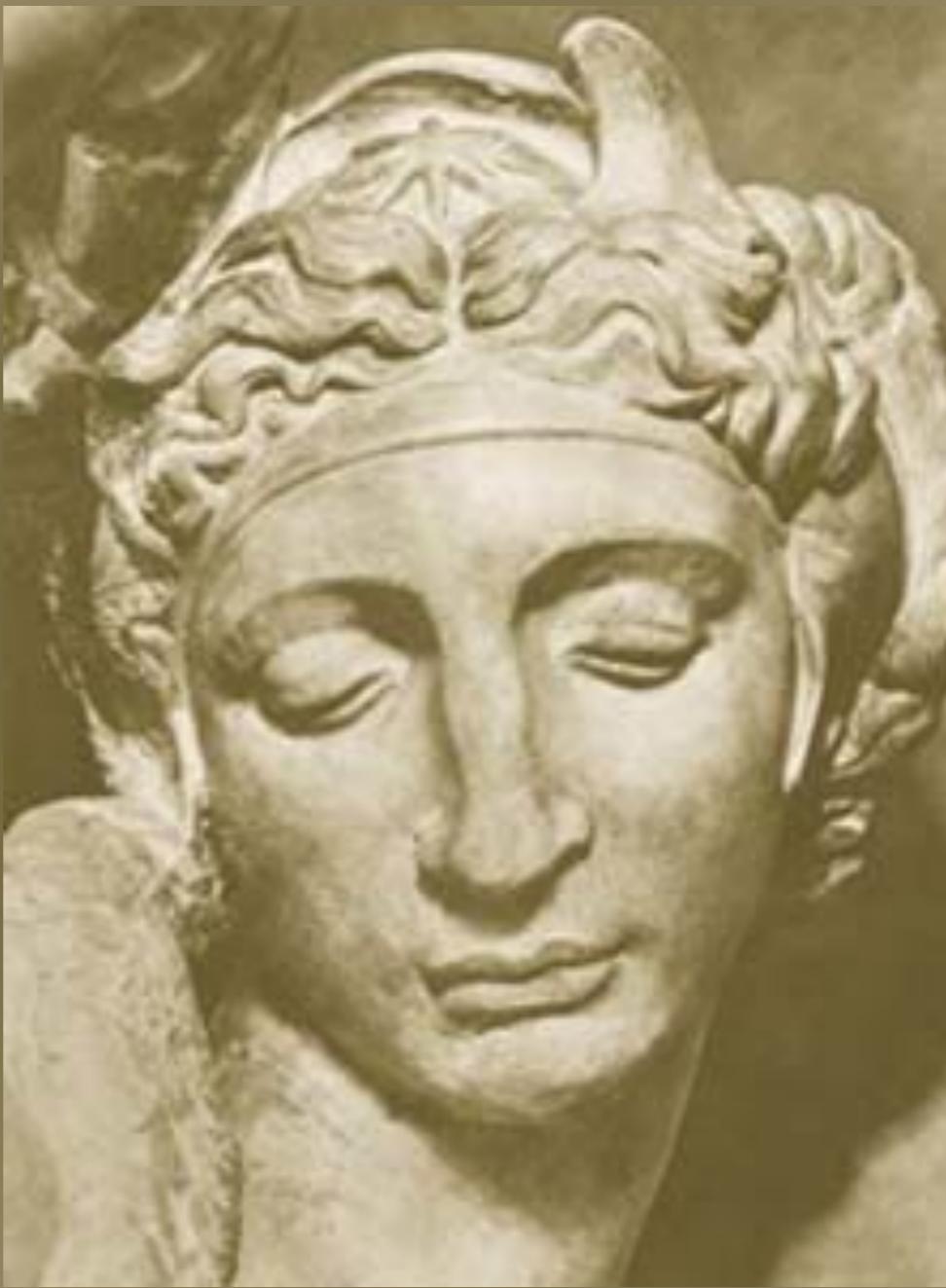
Building

People

Vendors

Ground

# Challenges



**Viewpoint variation**



## Illumination variation





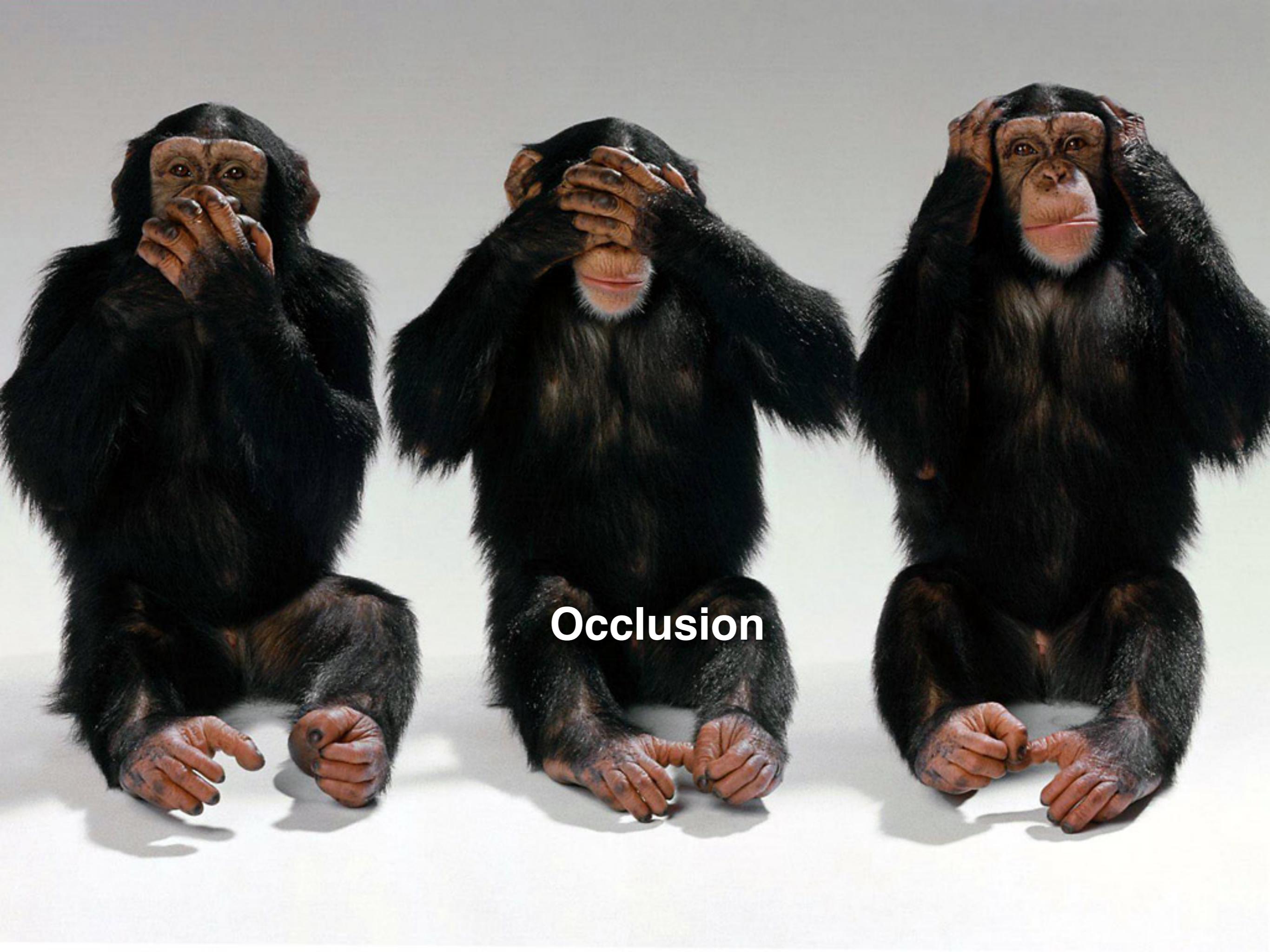
**Scale variation**



Background clutter



**Deformation**



Occlusion



**Intra-class variation**

# Approach

‘Classical’

# Image Classification Pipeline

