

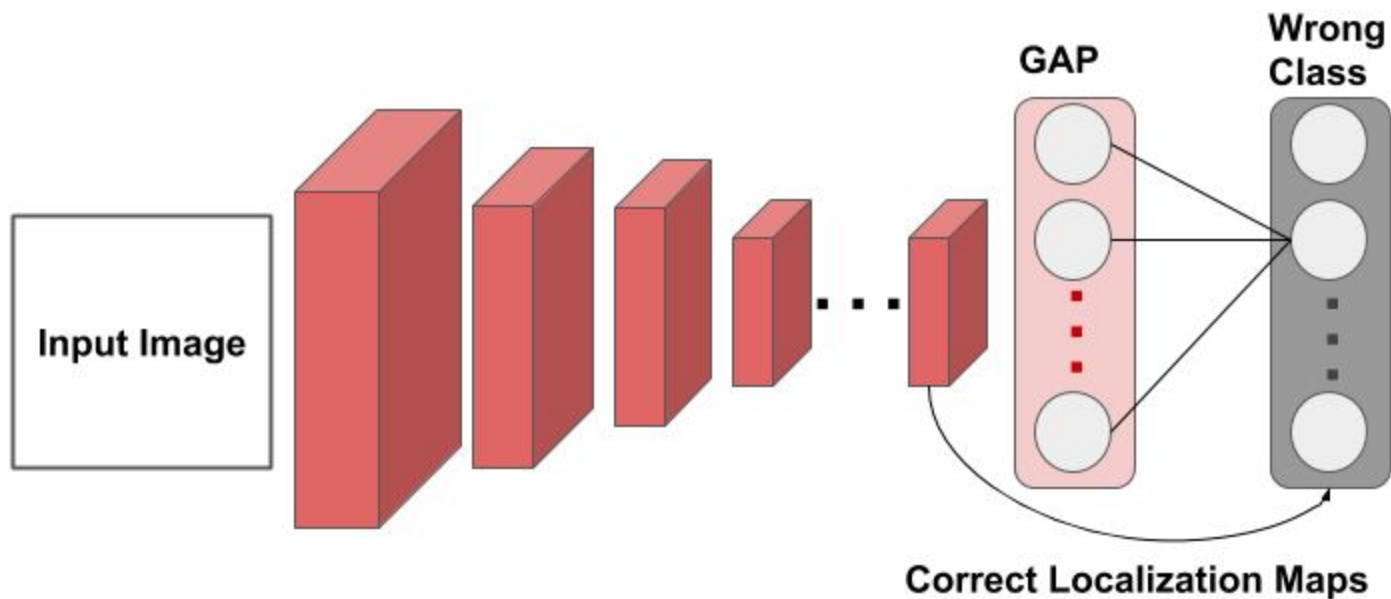


# Teach Your Robot

# Continual Robot Learning

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## Teach Your Robot About Its World



**New Class:  
Measuring Tape**

## ResNet-50 Class Activation Maps

# Robot Continual Learning

1. Features from temporal video are extracted for new object.



2. General Objectness Detector + Similarity Learning to relate detected objects to new classes.



# Robot Continual Learning

1. ImageNet contains 1000 classes but it does not contain all objects. One example ginger is not part of ImageNet Classes but is taught to the robot to be able to identify.
2. It generalizes well as it can identify small piece of ginger as its correct class, although it exhibits difference to the original ginger it was trained on.

**ImageNet Classes**



**ImageNet Classes + New Classes in red**

