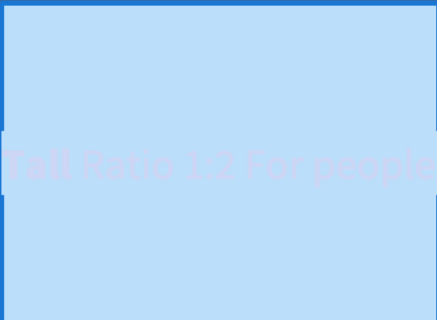# Anchor Boxes (Shape Priors)

Problem: A grid cell might need to detect multiple objects or objects of very different shapes (tall person vs wide car)

Solution: Pre-defined anchor boxes of different aspect ratios and scales

anchors

Tall Ratio 1:2 For people

Square Ratio 1:1 For faces

Wide Ratio 2:1 For cars

× 3 scales

scales

Small

Medium

Large

YOLOv3+: 9 anchors total (3 aspect ratios × 3 scales) Model predicts **offset from anchor** rather than absolute coordinates