

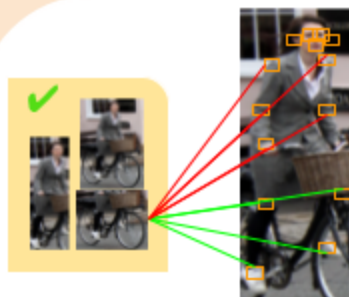
$$\underbrace{P(H) \cdot P(O)}_{\text{Stage 1: External Object detectors}} \cdot \underbrace{P(H \leftrightarrow O | H, O)}_{\text{Stage 2.1: Pair Matching}} \cdot \underbrace{P(R | H \leftrightarrow O, H, O)}_{\text{Stage 2.2: Relationship Prediction}}$$



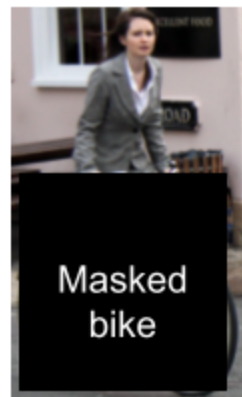
Object Detector



Stage 1: External Object detectors



Stage 2.1: Pair Matching



$$F_{affordance} = \{f_1, f_2, \dots, f_{10}\}$$

Stage 2.2: Relationship Prediction

Two stage Approach for HOI-Prediction