

Concepts:

△ Discriminant Function: a representation for decision regions and boundaries.
(convenient for classifying data points)

△ Criterion Function: defined before learning, used during learning
(usually people still call it loss function)

△ Objective Function: same as criterion function.

△ Loss Function: used to construct a criterion function or a performance metric.

Such as: MSE

Ex: yolov5

its Criterion Function = $a \cdot L_1 + b \cdot L_2 + c \cdot L_3$

$\begin{cases} a, b, c: \text{weights} \\ L_1: \text{Loss func of IOU/bounding box} \\ L_2: \text{Loss func of object} \\ L_3: \text{Loss func of classification type} \end{cases}$