

$p_1 \Rightarrow \text{cat}$

$p_2 \Rightarrow \text{Not cat}$

$$p_1 = \frac{3}{6}, p_2 = \frac{3}{6}$$

$$p_2 = 1 - p_1$$

$$p_1 = \frac{2}{6}, p_2 = \frac{4}{6}$$

$$H(p_1) = -p_1 \log_2 p_1 - p_2 \log_2 p_2$$

Entropy

Information gain

$$\text{Variance} = \frac{\sum (x_i - x_{\text{mean}})^2}{n - 1}$$

7, 7.1, 7.2, 7.3,

XG Boost



Gradient



boosting

Gradient descent

Grid search XG Boost

learning rate: $\{0.1, 0.2, 0.3\}$

max depth: $\{6, 7, 8\}$

9

Randomized Search

L.R :

[0.1, 0.2, 0.3]

Max depth:

[6, 7, 8]

