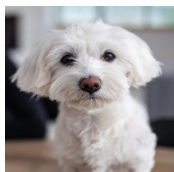


Dog:1.00
Cat: 0.00
Ship:0.00



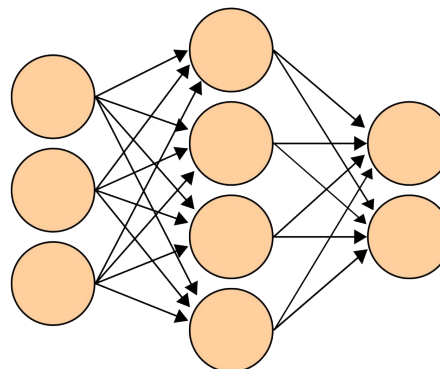
Dog:1.00
Cat: 0.00
Ship:0.00



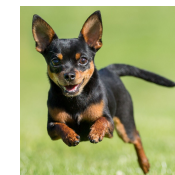
Dog:0.00
Cat: 1.00
Ship:0.00

Hard Labels

A) Training



B) Inference



Dog: 95
Cat: 4
Ship: 1



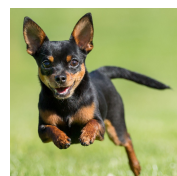
Dog:90
Cat: 8
Ship:2



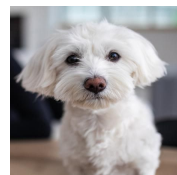
Dog:1
Cat: 99
Ship:0

C) Compute smoothed target probability class distribution

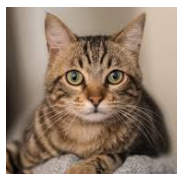
$$q = \min(f_i(x)) | i \in \{1, 2, \dots, K\}$$
$$f'_i(x) = u_{scale}(f_i(x)) - q \quad \forall i \in \{1, 2, \dots, K\}$$
$$\epsilon^{ILS} = \frac{f'_t(x)}{\sum_l^K f'_l(x)} \cdot \epsilon$$
$$y_k^{ILS} = (1 - \epsilon^{ILS}), \text{ where } k = t$$
$$y_k^{ILS} = \epsilon^{ILS} \frac{f'_k(x)}{(\sum_l^K f'_l(x)) - f'_t(x)}, \text{ where } k \neq t$$



Dog:0.905
Cat: 0.076
Ship:0.019



Dog:0.91
Cat: 0.072
Ship:0.018



Dog:0.099
Cat: 0.901
Ship:0.00

Smoothed Labels

D) Training

