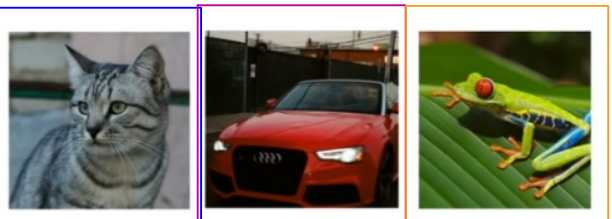
Suppose: 3 training examples, 3 classes.
With some W the scores $f(x, W) = Wx$ are:



cat	**3.2**	1.3	2.2
car	5.1	**4.9**	2.5
frog	-1.7	2.0	**-3.1**

$L_0 = 2.9$ $L_1 = 0$ $L_2 = 12.9$

$$L = \frac{1}{N}\sum_{i=1}^{N} L_i$$
$$= \frac{1}{3}(2.9 + 0 + 12.9)$$
$$= 5.27$$

Compute Multiclass SVM loss

$$L_i = \sum_{j \neq y_i} \max(0, s_j - s_{y_i} + 1)$$

choice of the safety margin doesn't really matter

$s_{y_0} = 3.2$

$$L_0 = \max(0, s_1 - s_{y_0} + 1) + \max(0, s_2 - s_{y_0} + 1)$$
$$= \max(0, 5.1 - 3.2 + 1) + \max(0, -1.7 - 3.2 + 1)$$
$$= \max(0, 2.9) + \max(0, -3.9)$$
$$= 2.9$$

$$L_1 = \max(0, s_0 - s_{y_1} + 1) + \max(0, s_2 - s_{y_1} + 1) \quad s_{y_1} = 4.9$$
$$= \max(0, 1.3 - 4.9 + 1) + \max(0, 2.0 - 4.9 + 1)$$
$$= 0$$

$$L_2 = \max(0, s_0 - s_{y_2} + 1) + \max(0, s_1 - s_{y_2} + 1) \quad s_{y_2} = -3.1$$
$$= \max(0, 2.2 + 3.1 + 1) + \max(0, 2.5 + 3.1 + 1)$$
$$= 6.3 + 6.6$$
$$= 12.9$$