

AI Week 4

Date Li Xinguan No. 1002189

Problem 1

$$\text{opt} = f(x), \text{ logits} = \text{sigmoid}(f(x)), L = - \sum_{i=1}^n y_i \log(f(x))$$

Use cross entropy loss, and before that a sigmoid layer.

Problem 2

Question 1

$$L(f(x), y) = \sum_{i=0}^{k-2} (y_i - y_{i+1}) + (5-k)$$

Question 2

add a parameter before the constraint, such as:

$$L = L(f(x), y) - \lambda \left[\sum_{i=0}^{k-2} (y_i - y_{i+1}) + (5-k) \right]$$

Question 3

sort $(y(y_0, \dots, y_k))$

infinite