

Errata Sheet

Last Updated: 9/10/2023

Chapter 1

- On page 20, in the paragraph preceding Section 1.2.3, the word “statistics” should be replaced with “statistic.”

Chapter 3

- On page 35, in the beginning of Section 3.1.3, all λ 's should be replaced with η .

Errata Sheet for Previous Versions

Applicable to versions before 2/4/2023

Chapter 3

- On page 42 and on page 43, the following Python code

```
ax = plt.figure(figsize=(12, 10)).gca(projection='3d')
```

should be rewritten as

```
fig = plt.figure(figsize=(12,10))
ax = fig.add_subplot(projection='3d')
```

The *gca()* function is now deprecated.

Chapter 4

- On page 53, the gradient of the SVM loss near Equation (4.9) should be written as

$$\nabla \ell = \begin{cases} -y\vec{x} & y\vec{w} \cdot \vec{x} < 1 \\ 0 & y\vec{w} \cdot \vec{x} > 1 \end{cases}$$

- On page 54, in Figure 4.4, the lines of boundary should be labeled $\vec{w} \cdot \vec{x} = -1, 0, +1$ (left to right).

Chapter 8

- On page 101, the phrase “an loss” should be written as “a loss.”

Chapter 11

- On page 137, in Definition 11.4.4, Jacobian matrix should be of size $J(\vec{z}, \vec{x}) \in \mathbb{R}^{\ell \times n}$
- On page 137, the equation in Example 11.4.5 should be written as

$$J(\vec{z}, \vec{x}) = J(\vec{z}, \vec{y})J(\vec{y}, \vec{x}) = \text{diag}(\mathbb{1}(\mathbf{A}\vec{x} > 0))\mathbf{A}$$

Chapter 15

- On page 197, the equation after (15.3) should be updated as

$$Q'_t = r_t + \gamma \max_b Q(s_{t+1}, b)$$

and similarly in page 198, the equation in the Example 15.3.3 should be updated as

$$Q'_t = r_t + \gamma \max_b Q(s_{t+1}, b) = 1$$

Chapter 19

- On page 242, the formula in Definition 19.2.5 should be written as

$$\left. \frac{\partial y_j}{\partial x_i} \right|_{\vec{x}} = \lim_{h \rightarrow 0} \frac{f_j(x_1, \dots, x_i + h, \dots, x_n) - f_j(x_1, \dots, x_i, \dots, x_n)}{h}$$